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ABSTRACT

This review of self-planned learning is divided into three parts: (1) learning theory, (2) instructional theory, and (3) practitioner application. Its objective is to help participants learn about the relevance and applications to and implications for adult development and learning of psychology. In the first part behaviorism and neobehaviorism are discussed in terms of learning theory, and a learning theory geneology is presented. A second section in part 1 focuses on adults involved in self-directed learning and their reasons for participation. Part 2 moves the discussion from learning theory to a theory of instruction, a move beyond the descriptive and explanatory to the prescriptive (to procedures to be recommended in practice). Self-instructional considerations are overviewed. A second section discusses adult instruction in terms of self-directed learning. Part 3 looks at how to integrate theory and practice, especially in reference to the adult learner. Needs assessment, the methodology of obtaining the how and what of adult learning, is discussed. Implications and policy considerations are also presented. (YLB)

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TOWARDS SELF-DIRECTED LEARNING THEORY

Patrick K. Penland, PhD*

Abstract:

Self-planned learning is reviewed in the Lewinian formulation B=f (p,e), where behavior is a function of the human situation. Self-initiated and self-planned learning is powered by motives (situational perception), guided by goals (diagnosed opportunities) and controlled by skills (interpersonal tactics). The approach, then, is one of studying the life space, the situational constraints and the transactions between people as processed intrapersonally within episodes. Learning is not simply a set of process/activities, but is something to be experienced by humans rather than as stimulus-response organisms. It is difficult if not impossible to discuss learning (episodic and sequential information processing) apart from communication.

Purpose (Charge to Presenters):

The objective is to help participants learn more about the elements of each force in the discipline of psychology, its relevance to the adult years, as well as the applications to, and implications for adult development and adult learning. An integration of both theory and pratice is sought and implications for adult learning are an important part of this endeavor. The following framework, therefore, is designed to address each force: (a) A separate description of the force within the discipline of psychology (b) Relevance of the specific force for the adult years; (c) How it has been, or could be, applied in practice, particularly in reference to the adult learner.

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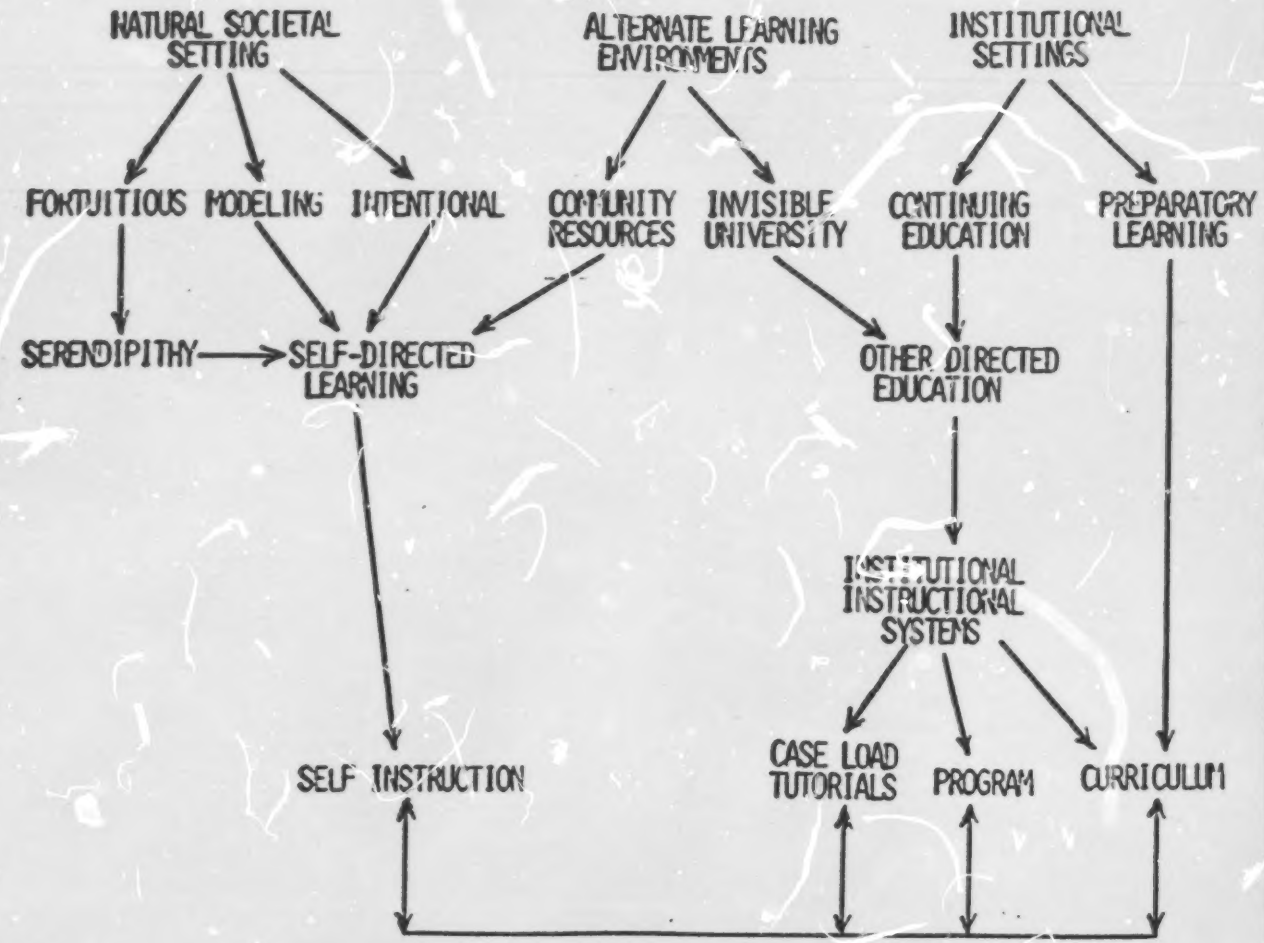
Diagram 1: Learning Environments (Adapted from Little 1978)



I. LEARNING THEORY

A. GENERAL DATA BASES

Behaviorism and Neobehaviorism

Behaviorism: The popular perception of behaviorism is of a rat in a maze or a child placed in a learning machine. This stereotype may be partly true because of the following characteristics of a behavioral approach to learning:

Externally observable behavior, laboratory induced.

Impersonal scientist humanly univolved.

Knowledge is an entity.

Stimulus-response based on rewards and punishment.

Tabula rasa child could be trained to do anything.

Experimental, operational, objective.

Apparently, reinforcement is a central issue because it has not been sufficiently emphasized that reinforcement is delivery of information, and a particular structure of information is implicit in any particular scheme of reinforcement. The rules of using reinforcement (Hilgard & Bower 1975):

Choose an appropriate reinforcement. (If it doesn't work, you'll have to choose another).

The reinforcement should come after the behavior. Grandma's Law: First you eat your vegetables, then you can have dessert.

The reinforcement should come as soon after the behavior as possible. Teachers who don't return students papers at all or who delay a long time are committing professional misconduct.

Many small rewards work better than a few big ones, especially for shaping.

There are other variations on the idea of reinforcement. Punishment is the opposite of positive reinforcement. Many people confuse it with negative reinforcement. In negative reinforcement a person is rewarded by escaping from an unpleasant situation, e.g., wandering around the room may be a way of escaping from facing an exam or from doing difficult and unrewarding work.

Since behaviorism is anchored in the observation of measurable phenomena, efforts can be made to increase range of instrumentation. With the addition of the prefix "neo"-, behaviorism admits to the existence of intervening variables (hypothetical constructs which may explain relationships, or unobservable links between variables); and it allows for more adequate attention to motivation and learning style.

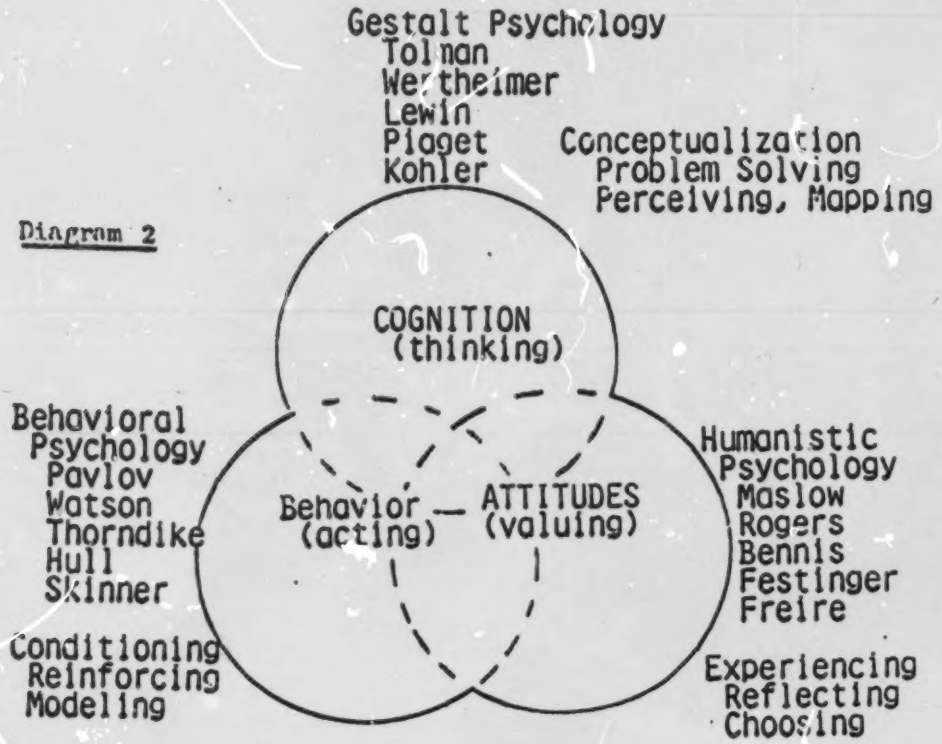


Diagram 2

SELECTED THEORIES OF LEARNING

Behaviorism, objective experimental, impersonal logical, operational, laboratory

Freudian, psychoanalytic, psychology of unconscious, instructural, ego, id. dynamic psychology

Phenomenology, existential, self-theory, self-actualization, growth psychology, being and becoming

Empathy, imitation, vicarious, observing, imagery, response differentiation

Diagram 3

Neobehaviorism is a type of behaviorism which (in contrast to Watsonian theory) is not restricted to objective (observable) variables and their direct relationships. Neobehaviorism uses such terms as "drive", "intelligence", "expectation", "failure", etc., which are taken from the psychology of consciousness, and allows of the introduction of hypothetical constructs (intervening variables) to explain a relationship when there are no observable links between variables. (Encyclopedia of Psychology. Vol 2. Herder & Herder, 1972).

Consciousness, a major component of "classical" psychology, was thrown out by the behaviorists, and brought back in by Tolman. According to Tolman, consciousness was the most real reality which a person could possess. Knowledge can only be formed by rational, logical and conscious effort. Conscious effort is introduced by intention (purposive) and concentration (volitional), and controlled by the application of attention. Since conscious doing, thinking and acting in humans are subject to control, it might be deduced that in the future research into consciousness will become increasingly important, especially in connection with information theory and computer techniques.

The essential behavioral feature of neobehaviorism is the retention of stimuli and responses, while the introduction of unobservable internal structure represents the "neo" component. In neobehaviorism as opposed to classical behaviorism it is quite appropriate to postulate a full range of internal structures, ranging from memory hierarchies to language production and language comprehension devices that cannot be, from the standpoint of the theory, directly observed. For example, if consciousness through dulled states of consciousness (stupefaction, confusion, twilight state) to a condition of optimal clarity of consciousness.

Learning Theory Geneology:

Apparently, many psychologists share the view that there are three broad emphases in American psychology. Certain words and phrases identify, even though they do not define these separate flowing trends. Associated with the first trend are terms such as behaviorism, objective, experimental, impersonal, logical, operational, laboratory. Associated with the second current are terms such as Freudian, Neo-Freudian, psychoanalytic, psychology of the unconscious, instinctual, ego-psychology, id-psychology, dynamic psychology. Associated with the third are terms such as phenomenological, existential self-theory, self-actualization, health-and-growth psychology, being and becoming, science of inner experience (Rogers 1969, p.2).

Most of the scholars who discuss learning theory assume relationships among the various schools of psychology and probably a geneology does exist. In the one instance where an attempt was made ("Psychsources" developed by CRM and Psychology Today, 1973), the lines of lineage are so intermingled as to be frustrating and almost unitelligable. For the purpose of this paper, the clear approach of Deshler and Benardot (1979) has been used with appreciation, "Selected Theories of Learning" (Diagram 2).

The categories of the diagram have summarized in a succinct and lucid manner the main schools of learning psychology as presented by such a widely accepted treatise as that by Hilgard and Bower (Theories of Learning, 1975). To go into each of these schools of psychology and their implications for instructional development is far beyond the scope of this brief presentation whose general purpose is to show broad relationships and to begin to delineate implications for self-directed learning.

Today there seems to be a considerable blending of the old theories even though major differences remain over such issues as: association (contiguity) versus reinforcement, extinction of response, jumpwise versus increment learning, one or more kinds of learning. These issues and others are discussed by Hilgard and Bower (1975) as well as the various attempts which have been made to integrate the schools of learning psychology. Instead of the hoped-for grand synthesis of learning theories, it appears that a fourth system of learning psychology has emerged from the efforts to integrate behavior modification and cognitive psychology (Diagram 3).

Social learning theory has been advanced as a systematic position by Bandura (1971) and others over the last decade and a half. Social learning theory is assumed to provide the best integrative summary of what modern learning theory has to contribute to solutions of practical problems (Hilgard and Bower 1975; p. 599-605). It also provides a compatible framework within which to place information-processing theories of language comprehension, memory, imagery, and problem-solving. For these reasons and others, it seems that social learning theory would appear to be the "consensus" theoretical framework within which much of learning research (especially that on humans) will evolve in the next decade.

In contrast to a learning-by-doing emphasis, social learning theory holds that a large amount of human learning is done vicariously through observing another person making the skilled responses (or reading about it, or viewing pictures of it) and then by trying to imitate the response of the model. In fact just from a brief review of the literature of social learning research, it would seem that observational learning is even more prevalent than self-directed learning. At this stage of development in social learning theory, four principal components of the process have been identified:

> Attentional processes on the part of the subject towards the person being observed as a model.
>
> Retention processes become integrated into memory by the associated impact of imaginal and verbal coded.
>
> Motoric reproduction skills require many small components even though communicated by observation, "cognitive rehearsal" or "imaginary practice."
>
> Reinforcement occurs in anticipation of vicariously experienced treatments, rewards and conditionings.

When neo-behaviorism is coupled with social learning, the melding seems to acquire a learning-by-modeling dimension in addition to the learning-by-doing components of self-directed learning. In any event, social learning theory has been advanced by Bandura (1971) and others and is assumed to provide best integration of modern learning theory to solution of practical problems (Hilgard & Bower 1975, p. 599-605). The following features of social learning theory are noted:

Framework within which to place i.p. theories, memory, imagery, and problem-solving; will evolve in next decade.

Not learning-by-doing, human learning is vicarious modeling, through observing others making skilled response (or reading about, or viewing pictures), and then by imitating response of the model.

Seems that observational learning is as prevalent as self-directed learning, with components identified as:

Attentional processes on the part of the subject towards the person being observed as a model.

Retention processes become integrated into memory by the associated impact of imaginal and verbal coded.

Motoric reproduction skills require many small components even though communicated by observation, "cognitive rehearsal" or "imaginary practice."

Reinforcement occurs in anticipation of vicariously experienced treatments, rewards and conditionings.

As individual observes and empathizes with others as models, probability increases that response pattern resembling the other will occur.

Response is further refined and differentiated as rate is increased by reinforcement vicariously experienced.

Once activity has been initiated, practice continues to be alternated with observation.

Many characteristics of behaviorism combine with other theories in explaining memory formation.

Memory is ability to retain past experiences, while remembering calls an experience to mind, or to the thinking of it again.

Close relation of "learn" and "know" is obvious; remembering is primary way in which people know things, and by which knowledge claims are supported.

In other words, as an individual observes and empathizes with another person serving as a model, the probability increases that a response pattern resembling the one sought will occur. The response can be further refined or differentiated and its rate increased by reinforcement vicariously experienced. Thus, once the activity has been initiated, most benefit accrues from actual practice which may continue to be alternated with observation.

DEVELOPS A GENERAL AWARENESS OF THE NEED FOR HELP OUT OF SOME TRANSACTIONAL SITUATION.

BECOMES FAIRLY SPECIFIC ABOUT JUST WHAT IS NEEDED AS A RESULT OF ARTICULATING THE ASSOCIATED FEELINGS.

SELECTS PARTICULAR RESOURCES PARTLY THROUGH SERENDIPITY AND PARTLY AFTER SEEKING ADVICE.

DECIDES HOW TO APPROACH INDIVIDUAL RESOURCES AS WELL AS HOW TO OBTAIN SPECIFIC INFORMATION AND PLANNING ASSISTANCE.

TAKES SOME ACTION WHICH TENDS TO PLACE A HOLD ON THE FUTURE AND PRODUCE SATISFYING PERSONAL RESULTS.

Clearly, many of the characteristics of behaviorism combine with elements of other theories in the explanation of memory formation. Memory is the faculty of retaining and recalling past experiences, or the ability to remember; while "remembering" is defined as recalling an experience to mind or thinking of it again. In everyday dealings, memory (or remembering) is one of the primary ways by which we know things and by which knowledge-claims are supported. In fact, the close relation between the meanings of "learn" and "know" are almost too obvious for explication.

Thus, there are advantages to the fact that behaviorism as a psychology of learning is anchored in the observation of measurable phenomena. The fact that behaviorism has added the prefix "neo"- can also be an advantage. Since it admits to the existence of intervening variables (hypothetical constructs which may explain relationships or unobservable links between variables), efforts can be made to increase the range of instrumentation. The incentive is there to try and measure or test for previously unmeasurable variables.

Neobehaviorism "allows" for the more adequate instrumentation concerning motivation and learning style which can be employed in large scale national surveys. Such taxonomic work could be based on experiential learning theory as developed from the patterns of behavior observed when adults are engaged in learning activities. Hopefully, these developments will replace the traditional taxonomies of educational objectives derived from the way teachers teach and not from the way people actually do learn.

In other senses, neobehaviorism offers advantages particularly in what Hilgard and Bower (1975; p. 27) refer to as a despair of finding a secure position in any one psychology and of falling into eclesticism where each theory is equally plausible. One ought to be able to systemize without closing one's eyes to alternate approaches to interpretation especially when most of the facts of learning could be accepted by all approaches. Hence the differences between any two theorist are primarily differences in interpretation. Both theories may fit the facts reasonably well, but the proponent of each theory believes his view to be the more fruitful.

The great controversies of the past in the various psychologies (schools) have been over the intropretation of facts upon theory. Theory is a set of integrated concepts; a concept is a relationship (ie. a tested hypothesis). Regardless of particular theories, one should be able to take an integrated position on the basis of definition and the general kinds of questions which might be raised. Hilgard and Bower (1975, p.17) propose the following definition:

> Learning refers to the change in a subject's behavior in a given situation brought about by repeated experiences in that situation, provided the behavior change cannot be explained on the basis of native responses, tendencies, maturation, or temporary states of the subject such as fatigue, drugs, etc. (Hilgard and Bower 1975, p. 17).

Such a definition points to the need for some coordination if not integration in the various approaches to learning and for a rationale that education (communication) is one of the ways by means of which all the resources of a social group may be out to work for the betterment of life. It reminds one of the definition proposed by Lyman Bryson so many years ago (1936, p. 3):

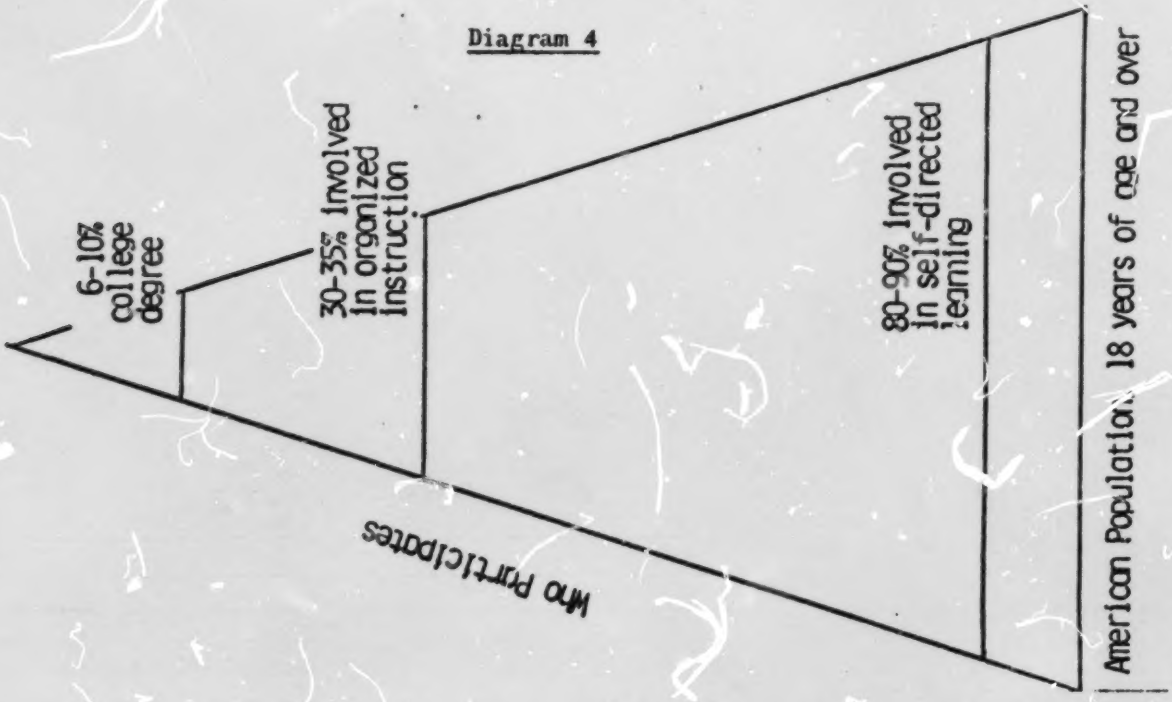
> Adult education includes all activities with an educational purpose that are carried on by people engaged in the ordinary business of life.

Table 1

20%	NONLEARNERS
80%	LEARNERS
5%	COURSES ONLY
11%	COMBINATION
64%	SELF-PLANNED
3-4	SELF-PLANNED PROJECT A YEAR
156	HOURS AVERAGE LENGTH

WIDE VARIETY OF HELPERS

Diagram 4


6-10% college degree
30-35% involved in organized instruction
80-90% involved in self-directed learning
American Population 18 years of age and over
Who participates

B. ADULT DATA BASES

Four out of five Americans conduct 2-3 self-directed learning projects every year averaging 156 hours each. Self-planned learning has mushroomed and transformed the cultural fabric into a lifelong learning society. In addition, the frequent occurance of such personal change patterns is making an enormous impact upon the lifelong learning society in the post-modern world. The reasons for this commitment lead these 130 million adults into an ever-widening range of values, lifestyles and goal attainment; and offers practitioners an unparalled opportunity for meaningful intervention as helping consultants (Table 1).

Who Participates:

Several striking learning patterns and potentially significant information processing behaviors of American adults have been identified. Almost 80% (78.9%) of the population of 18 years and over perceive themselves to be continuing learners whether in self-planned or formal courses. Surprisingly, very few (2.9%) are engaged only in courses or school-like activities. Apparently, course-work in continuing education is but a supplement to the more commonly accepted self-initiated learning projects. The length of time devoted to these self-directed projects may range from one hour to 500 or more; but the mean average of 155.8 hours duration.

Over three-quarters (76.1%) of the entire U.S. population has planned one or more learning projects on their own during the year. These learners initiate a number of projects ranging from 1 to 18 per person in a wide scope of topics largely related to the transitional nature of everyday life. Employing the cut-off duration of 7 hours minimum, established in previous research, the number of projects is 3.3 per person who is identified as a self-initiating learner (Diagram 4).

Much of the current emphasis on self-directed learning appears to have developed from a foundation laid by Tough's original study, Adults' Learning Projects (1971; 2 ed 1979). In this research, Tough found that nearly 70% of the learning projects undertaken by persons in his sample were planned primarily by the learners themselves, as opposed to a teacher or some other human or nonhuman resource. Considerable subsequent research has verified these findings, and this awareness of a heavy involvement of "self" has stimulated considerable interest in, research on, and literature about the self-directed phenomenon (Hiemstra 1980a, 1980b; Cross 1979, 1981; Tough 1978; Coolican 1974)(Diagram 5).

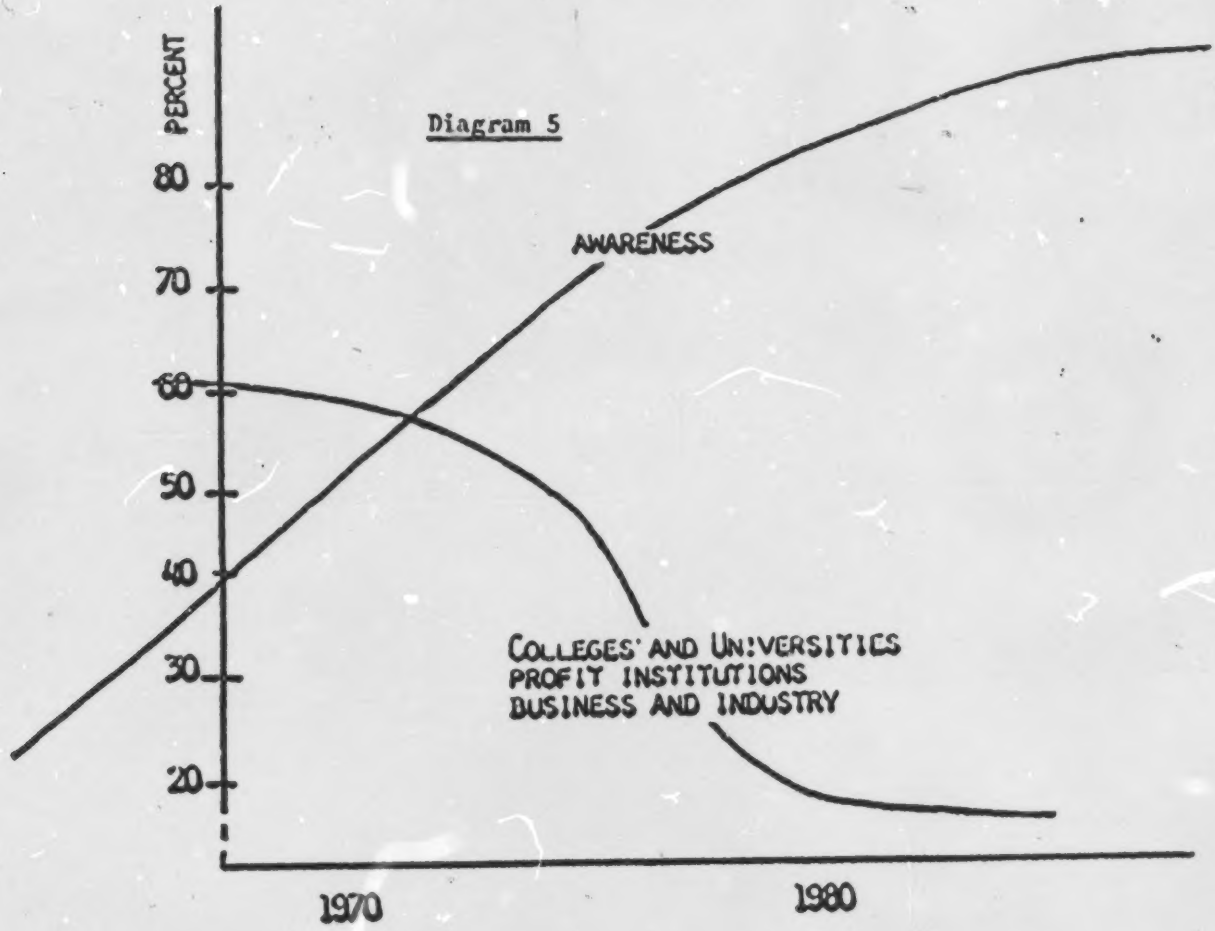


Diagram 5

Why Adults Participate:

There may be as many reasons for lifelong learning as there are citizens negotiating everyday transactions. But a rapidly growing number of individuals prefer those planning modes which include the self as planner ("teacher") or a closely associated and personally accessible helping "assistant" such as another human or non-human planner. The reasons for undertaking a self-initiated learning project are now; and such comments indicate an increasing maturity among adult learners:

> I like my own way of learning and speed of going about doing it.
>
> I wanted to keep the learning (strategy) flexible and easy to change.
>
> I want to put my own structure on the learning (project) rather than wait for a course.

Educators may increasingly want to take into account this growing need of many people for more control over the learning enterprise. These reasons indicate that a great many people are concerned about setting their own learning pace and exploring their own style of learning rather than submitting to formal course-oriented experiences. On the other hand, the usual reasons given as to why adults may be inclined to avoid the programs of institutional education were ranked very low indeed:

Lack of time to engage in a group learning project.

Transporation to a class is too hard or expensive.

Didn't have enough money for a course or class.

Didn't like formal classroom situation with a teacher.

With the widespread emergence of the "electronic cottage", location and convenience problems disappear but other reasons exist as to why the self predominates as the major planner to the exclusion of almost anything else (Tough 1971, p. 93-94):

Lose time trying to identify and locate appropriate helpers while the self is readily available.

Confident can handle, especially self-reliant and independent persons.

Lacks full commitment to topic, may want to change, seeks freedom to maneuver.

Skilled at locating materials and/or browsing ability whether in library or neighborhood.

Unique approach to synthesizing knowledge permits the individual to develop a particular structure.

Pleasure in learning successfully by self or to impress others.

Thus, self-initiated learning by individuals involves the comparing of behavioral patterns against remembered or retrieved knowledge as well as the modification of perceptual connections. Sustained attention reduces "random" activity, discovers the information and builds the competence to plan an entire learning sequence. In the process, new competencies are built by observing and receiving "instruction" from environmental imperatives, by making trial performances before adjusting to feedback, and by growing more flexible and independent. There are a number of concepts in Tough's approach to self-directed learning:

Learning centered around the individual's perceptions of environment.

Self-instruction is negotiation of happenings, or otherwise contrived.

Conditioned by initial perceptions, learner is constrained in project phasing and syntax only by habit.

Episodic nature of learning time-line has not been considered sufficiently.

Processes in relation to learning style need further investigation.

What turns on, and sustains sequential consideration in episodes over time have been neglected as well as other aspects of episodic time-lines such as:

Situational embeddedness, interpersonal perference, orientation state, goal direction, situation-facing tactics, movement strategies, content stagility, topic focus, helping utilities, resolution status.

Thus, self-directed learning theory is similar to experiential learning theory. Stimulus data from the environment (real, simulated, or remembered) are intrapersonally processed into information. Surprisoful data (information), processed through episodes of attention, add to, or modify the knowledge base of the individual. In this process of becoming knowledge, information may be verified (by consulting others, or in file retrieval). However, the aspects need attention:

Self-teaching occurs within the support system of happenings and episodic environment.

Self-instruction emerges from the happenings of everyday life.

Initiative is strengthened in encounters.

Learning is guided by personal objectives.

Individual remains squarely in control, even though others may help.

An explanation of why people learn is based in the collection of data along the patterns dictated by theory. Despite the various laments over the lack of theory in adult education, some efforts have been made. A convenient summary and integration is available (Cross 1981, p. 109-22):

Force-field analysis of Henry Miller growing out of Lewin's formulations of a field theory of learning stemming from Gestalt psychology.

Expectancy-valence paradigm of Kjell Rubenson growing out of Tolman's and others attempts to integrate behaviorism and cognitive psychology.

Congruence model of Roger Boshier extends the Miller and Rubenson approaches into an estimation of discrepancy between participant self-concept and the personology of educational institutions.

Anticipated benefits model of Allen Tough growing out of the assumption that behavior is understood, and can be articulated by the subjects.

Readiness to participate model of Cugliomino and Hassan delineates factors associated with self-directedness.

The common elements in these existing theories have been drawn out and articulated by Cross (1981, p. 122-24). In making these comparisons, the Boshier Congruence Model is included as an extension of the Rubenson paradigm; and the readiness to participate model is included in Tough's anticipated benefits:

1. All three are interactionists, operating from the conviction that participation can be understood through an analysis of the interaction between an individual and his or her environment.

2. All use some form of field-force analysis, drawing heavily from the work of Kurt Lewin and the concept that the strength of the motivation to participate in adult education is the result of the individual's perception of positive and negative forces in the situation.

3. All might be termed "cognitivists" in the sense that they believe that the individual has some control over his destiny. They reject both the Freudian notion that human beings are the captives of subconscious forces and the Skinnerian contention that people are pawns in stimulus-response chains.

4. Rubenson and Boshier are quite explicit about the hypothesis that certain personality types will be difficult to attract to education because of their low self-esteem. The hypothesis that people with low self-esteem do not do well in achievement-oriented situations (which education is thought to be) has been a kingpin of psychological theories of motivation for some years. The hypothesis is also implicit in Miller's social class analysis, where he considers lack of achievement motivation a deterrent to the participation of the lower-lower socioeconomic classes.

5. All make some use of reference group theory, with Miller and Rubenson explicitly recommending that undereducated adults be recruited not through market strategies but by working through membership groups.

6. All make some use of the concepts of incongruence and dissonance. Boshier refers to his work as a "congruence" model; Miller's analysis is based on the compatibility of the values of the various social classes with the values of the educational system. For Rubenson the concepts of expectancy and balance assume congruence between participation and anticipated outcomes.

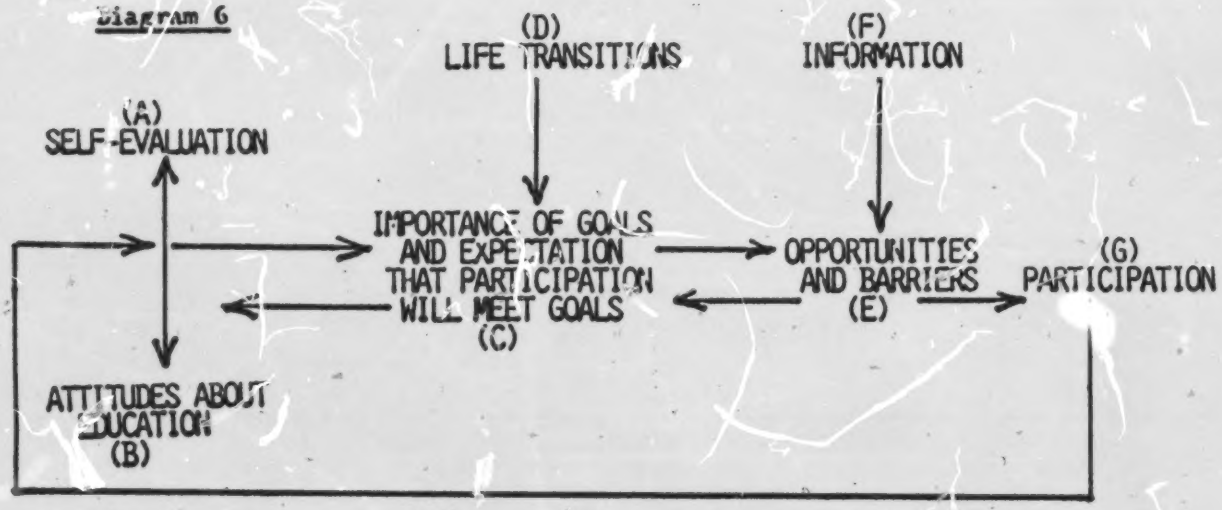
7. There is strong use of Maslow's needs hierarchy in these works. All accept Maslow's basic premise that

higher-order needs for achievement and self-actualization cannot be fulfilled until lower-order needs for security and safety have been met.

8. Rubenson has developed the role played by "expectancy" more thoroughly than the other two theorists. But all assume that the individual's expectation of reward is an important variable in the motivation for adult learning.

Cross (1981, p. 124-31) does not let the matter drop at this point, but goes on to develop a Chain-of Response Model. In presenting this model, Cross makes the following caveat (1981, p. 124): "While it is still far from the kind of theory that can be used to predict who will participate in which adult learning activities, it may be useful in organizing existing knowledge and in suggesting more sharply focused research projects to add to the gradual accummulation of knowledge." The diagram which she has developed appears as follows:

Diagram 6



Despite this provision, the model is invaluable in showing the relationships among the findings of research in adult learning, self-directed learning and adult developmental psychology. Up-front in the COR model are placed the major motivational forces of self-evaluation (A) (cognitive aspects) and attitudes towards adult education (B) (affective aspects) which operate on goal expectations (C). These goals are influenced by life transitions (D) (vocational pursuits and interpersonal relations). In articulating opportunities and constraints (E) the impact of information (F) (Educational Information Networks) under the mediation by "missing link" professionals (Cross 1978) is assessed.

II. INSTRUCTIONAL THEORY

A. GENERAL INSTRUCTION

Since neobehaviorism has gone through by far the most transformations, it would seem to hold promise as a guide to future developments. Actually, such an advance is precisely the point that this presentation has to offer and can be sumed up in the following proposition; continued research about self-directed learning will provide the data bases, the learning constructs and applications that are expected to make a significant contribution to the integration of general learning theory. Already there is a fairly respectable accumulation of findings about adult learning as well as self-planned learning which complements the research findings on animal and human subjects.

Self-Instructional Considerations:

To move from theory to practice is not at all easy. The popular view is that the researcher stocks a kind of cupboard with psychological principles which can help in solving the problems of the teacher. When a crisis arises, the teacher can take a band aid from the cabinet and apply it like a bandage or an ointment to solve the educational problem. With a theory of instruction, however, the educator is not limited to such a piecemeal approach. This advance allows for a systematic approach to the creating of an environment within which learning can occur.

But the theory remains to be integrated within the general principles of learning as provided in Hilgard's contribution (Chapter 16) to the 4th edition of the Theories of Learning (1972). A theory of instruction differs both in its goals and in its content from a theory of learning. It seeks to move beyond the descriptive and explanatory to the prescriptive, that is, to procedures to be recommended in practice. Its content, therefore, must take into account the actual curriculum of the agency and the social contexts in which learning occurs.

General Question Areas: The preferences of theorist often lead them to concentrate upon one kind of learning situation to the neglect of others. Specific theory is then limited to that situation, but becomes somewhat strained in relation to the other problems of learning. A comprehensive learning theory ought to answer the questions which an intelligent nonpsychologist might ask about the sorts of learning which are met in everyday life. Hilgard and Bowers (1972, p. 21-23) propose the following questions because the answers to them may serve to help integrate learning theory into a cohesive system:

> What are the limits of learning? Who can learn what? Are the limits set at birth? Do people get more or less alike with practice?
>
> What is the role of practice in learning? Surely practice makes perfect; but what do we know about practice in detail? Does improvement depend directly on the amount of repetition? Can repetitive drill be harmful as well as helpful to the learner?

How important are drives and incentives, rewards and punishments? It may be easier to learn something which is interesting than something which is dull; but are the consequences of rewards and punishments equal or opposite? Is there a difference between intrinsic and extrinsic motives in their effect upon learning? How do goals and purposes affect the process?

What is the place of understanding and insight? Some things are learned more readily if we know what we are about such as travelers in understanding a timetable or a road map. But vowels can be formed satisfactorily without knowing how to place the tongue and one can read without being aware of eye movements. Some things appear to be acquired blindly and automatically; other things are a struggle to understand and can finally only be mastered as they are understood. Is learning in the one case different from what it is in the other?

Does learning one thing help you learn something else? This is the problem of transfer of training. Some transfer must occur or there would be no use in developing a foundation for later learning. The question is really one of how much transfer takes place, under what conditions, and what its nature is.

What happens when we remember and when we forget? Some things that we may wish to remember are forgotten: somethings we would be willing to forget continue to plague us. There are often gaps and distortions of memory; and people can remember what did not happen. What is taking place? What control has one over the process involved?

Table 2: Helping Stances

AROUSE AND SUSTAIN ATTENTION BY ELICITING A DESCRIPTION OF THE CONTEXT OF HI/R PROBLEMS.

INSURE KNOWLEDGE RECALL BY ANALYZING CONSTRAINTS AND OPPORTUNITIES.

GUIDE CONCEPTUAL DEVELOPMENT BY RELATING OPPORTUNITY CUES TO INFORMATION.

FEEDBACK DEVELOPING IDEAS BY NEGOTIATING ONE OR MORE RETRIEVAL STRATEGIES.

ENCOURAGE BEHAVIOR CHANGE BY APPLYING NEWLY VERIFIED INFORMATION.

ASSESS BEHAVIOR OUTCOMES THROUGH SOME FORM OF MEASUREMENT AND EVALUATION.

The role of the professional has moved from sole producer of product to the creation of environments within which meaning can be engendered in the consumers who were previously called students. One of the first systematic approaches taken towards the integration of instructional theory extracts four major models by means of which the consultant can create appropriate environments (Joyce and Weil 1972):

Instructional Theory	Learning theory
Behavior Modification Cybernetic Models	Behavioral Psychologists
Information Processing Models	Gestalt and Cognitive Psychologists
Personal Models	Humanistic Psychologists
Social Interaction Models	Sociologists and Authropologists Empathy, modeling, imitation

Table 3

These models can serve as useful guides to the conditions or situations designed or occuring as a happening within which meaning can be engendered in the mind of another human being. The situation can be perceived as an interlocking set of components which engages the attention of the individual in an episode of awareness. The initial apprehension is almost like a compulsive leap and a grasping at understanding until differentiation occurs. As attention begins to diffuse inward from the surpriseful encounter, awareness spreads towards that cluster of behavior characteristics "dictated" by the initial apprehension.

An environmental approach to human learning suggests that the individual learns whenever the conditions are available for a surpriseful encounter. These conditions occur so frequently in the transactions of everyday life that most individuals becomes experts in negotiating these encounters episodically as they occur (Steinaker and Bell 1979). A behavior set typical of the initial encounter is maintained in spite of the diversity of events. Although fascinated for various periods of time, the individual may tire of the promiscuity of happenings while attention shifts towards longer periods of engagement extended sequentially.

Developmental Psychology has grown considerably from its early interest in the work of Havighurst and of Erikson. The value of a developmental approach lies in answers to such questions as what adults are ready to learn at various times in their lives and about how they may be aided in completing the various tasks of life development. Chickering (1981) provides considerable help in exploring the implications of development psychology for the learning, instructional and self-instructional patterns and processes.

Learning as Process has been extensively explored over the years by numerous learning psychologists. This paper started with a brief overview of learning psychology and its many schools of inquiry. One has only to review the textbook on the subject by Hilgard and Bower (1972) to obtain an overview of a vast amount of research over the years. For the most part, however, the research subjects from whom data is collected remain white mice, pavlovian dogs, and college fresh persons. By comparison, the data base obtained from adult subjects is very meager indeed.

When perception is aroused by any one of a range of environments, there is something about that environment which makes the person worried, perplexed, embarrassed or determined. The situation, as situation; is objective or at least apersonal. However, people's perceptions of situations give them a certain anthropomorphic value as revealed by survey research (Dervin 1976) and folklore studies (Anderson and Moore 1960).

There may be any number of these perceptually induced intrapersonal system states when the individual is in contact with an environment. The variety of these, in kind or in combinations, may range across the entire inventory of human populations. Research so far has been conducted on the assumption that four perceptual apprehensions are predominant (Anderson & Moore 1960; Dervin 1976):

SITUATIONAL PERCEPTION	STRATEGIES
CHANCE/WORRY WHERE VALUES ARE CHALLENGED IN A SITUATION PERCEIVED AS BEING BEYOND THE ABILITY OF THE INDIVIDUAL AS PATIENT TO HANDLE (ME).	EMOTIONAL STRATEGY TO SHAKE OFF THE PERCEPTUAL EMBEDDEDNESS SUCH AS GET ANGRY, COMPLAIN, PUT SITUATION OUT OF MIND, OR FIND SOMEONE TO AGREE THUS ACHIEVING SOME MOVEMENT.
PUZZLE/PROBLEM WHERE THE INDIVIDUAL IS AN ACTOR/AGENT WITH A GOAL BUT WHERE SOCIAL INTERATION IS AT A MINIMUM (I).	DESCRIPTIVE/DIAGNOSTIC STRATEGY TO SHAKE OFF SITUATION EMBEDDEDNESS SUCH AS CHANGED VIEW THROUGH REFLECTION, INFORMATION (READING) PERUSAL.
STRATEGY/DECISION REQUIRES CONFIDENCE IN OTHERS BEHAVIOR AS PREDICABLE AND RECIPROCAL AWARENESS OF ONE'S OWN ACTION AS OTHERS DO (SIGNIFICANT OTHER).	INTERPERSONAL STRATEGY TO SHAKE OFF SOCIAL EMBEDDEDNESS BY INVOLVING SOMEONE, SOLICITING HELP OR GETTING SUPPORT FOR AN OPTION.
CREATIVE/COMPREHENDING WHICH SYNTHESIZES PREVIOUS BEHAVIORAL STEPS INTO A DEVELOPED PLAN OR PROGRAM FOR ACTION (GENERAL OTHER).	READ, VIEW, LISTEN FOR A COGNITIVE STRATEGY TO SYNTHESIZE A WHOLE THROUGH FACTS, PLANS AND PREDICT OUTCOMES.

An individual's response to a situation is a personal matter based on an "agenda" of his/her own devising however emotional and personal it may appear. Apparently people involved in everyday transactions want to talk out their version of the situation and "dredge up" from their own background the framework for a solution that can be personally satisfying.(Dervin 1976). At various times, some individuals:

> Try to learn the situation or system -- what resources are available, what are the laws and rules, what is the structure of the system, who else is involved, how others and the self are involved, or how well the system works.
>
> Already have goals and want to learn about possible options and the comparison of alternatives with their own priorities, or about the "best" options.
>
> Become involved with timing and location considerations -- when and where to do things, what the future will be like, when and where others did things.
>
> Develop concerns about underlying reasons, causes, motives and history -- why things happen, what others felt in the past, and what past experiences could be useful guides.
>
> Search for the ideas, opinions, or agreements of others -- what others think or want, or whether or not others agree.
>
> Want procedures for dealing with their situations -- how to get through the system, how to balance and compromise, what strategy to use, or what information to find.

Certainly more effort could be made to translate the findings of research into practice such as those which seem to hold considerable promise for self-directed learning. This is especially desirable for those interpretations supported by the post-neobehaviorists and the social learning theorists. One leading exponent has translated post-neobehaviorism principles into prescriptions that seem to be relevant to self-directed learning (Bugelski 1979, p. 370-84):

> Consultant as instructor can serve a model of network figures in representing observable characteristics or by raising questions and "advance" organizers.
>
> Learning takes time to assemble notes, organize outlines or insert illustrations, and is a product of the sequentiality of information processing episodes.
>
> Intent to learn is not enough for learning to occur; it only gets one to the source(s) which gives occasion to the associations, the intuitions or new combinations of old relationships.
>
> "Recitation" in observation achieves some meaning through (a) imagery, examples, situations or (b) definitions, encyclopedia treatment.
>
> Information decoding skills are the reciprocal of message encoding patterns and allow the individual (a) to vicariously see the self in situation, or (b) to raise questions and develop mnemonic tabs.

Table 4: Tutorial Components

SELECT A TOPIC:

1. ARTICULATE INTEREST AND REFERRENT CONTEXTS.
2. DIFFERENTIATE IT FROM OTHER AREAS.
3. SPECIFY RELEVANT SUBPARTS SUCH AS CONTENT AND DIRECTION (GOALS).

ORGANIZE A TOPIC:

4. GROUP THE SUBPARTS INTO RELATIONAL PATTERNS (LEARNING CONTRACT)
5. TRANSLATE PATTERNS INTO "ENGAGERS" (QUESTIONS, ISSUES, TASKS)
6. STATE A BEGINNING POINT, DIRECTION AND AN END.

COMPLETE TOPIC AND EVALUATE:

7. MAKE DECISIONS AND CONDUCT ACTIVITIES TO ACHIEVE GOALS.
8. DETERMINE LEVEL OF PERFORMANCE AND SATISFACTION EXPECTED.
9. COMPARE AND CONTRAST (TEST) GOALS WITH ACTIVITIES.

Table 5: Horizontal Components

1. WHAT IS TAKING PLACE? ONE CAN TELL THAT A CLIENT HAS SELECTED AN AREA OF INTEREST WHEN S/HE NAMES IT. SELECTING, DIFFERENTIATING AND PATTERNING CONSTITUTE THE DATA GATHERING AND EXAMINATION MODE.

2. WHY IS IT TAKING PLACE? COMPREHENSION DEVELOPS WHEN EXPLANATIONS ARE SOUGHT. IN ANALYZING SOMETHING, THE CLIENT LOOKS FOR CAUSE-EFFECT; THE RELATION OF DATA TO ASSUMPTIONS ABOUT VALUES, ROLES, THEMES, PRINCIPLES; AND AN EVALUATIVE FRAME OF REFERENCE.

3. WHAT WOULD HAPPEN IF...? INTEGRATION AND OUTPUT OCCUR WHEN PRINCIPLES ARE APPLIED BY TESTING AND DEMONSTRATION. A WHOLE NEW SET OF SKILLS OR A CREATIVE NEW WORK MAY EMERGE AS OUTPUT FROM THE LEARNING PROJECT.

B. ADULT (SELF) INSTRUCTION

The variety of sources of information sought by citizens is so varied and extensive that only a "yellow-pages" directory could hope to provide current listings. Informative data is sought most often among the delivery services which maximize these display methods typical of the museum, the record mart and the book store. In any event, the reasons for keeping up to date as ranked by continuing learners appear to be related to the sophistication with which learning is undertaken, such as:

Clarify a situation and make progress towards a goal.

Understand and diagnose the situation and thus achieve self-control.

Choose between options or alternative ways of doing something.

People describe themselves as being involved in these periods of time, or spans of attention, averaging 25-35 minutes within which the need for information emerges. This involvement in a period of more or less deliberate awareness helps them elicit perceptions of such "problems" as worry over change disturbances, complaints about shared and possibly divided control and apprehension over whether tentatively formulated hypotheses may be criticized by others:

INFORMATION EPISODE: SURPRISE VALUE OF DATA HOLDS INDIVIDUAL ATTENTION

PEOPLE CONSULTATION	10-25 MIN.
BROWSING, SEARCHING	20-45 MIN.
READ, VIEW, LISTEN	30-120 MIN.

LEARNING EPISODE: ACQUIRE AND RETAIN SOME DEFINITE KNOWLEDGE OR SKILL

"LESSON PLAN" IN A "SYLLABUS"

LEARNING PROJECT: LEARNING EPISODES LINKED TOGETHER IN 7+ HOUR SEQUENCES

VERTICAL/HORIZONTAL COMPONENTS LINKED TOGETHER BY COMMON THEME, GOAL

51 + % MOTIVATION TO GAIN AND RETAIN SOME KNOWLEDGE, SKILL

PRACTICAL TOPICS		75.9%
HOBBIES	SPORTS	
CRAFTS	GARDENING	
HOMEMAKING	HOME REPAIR	
INTRAPERSONAL TOPICS		17.2%
SENSORY AWARENESS	SOCIAL RELATIONSHIPS	
RELIGIOUS EXPERIENCE	EMOTIONAL PROBLEMS	
COURSE-LIKE TOPICS		6.9%
HISTORY	SCIENCE	
MATHEMATICS	ENGLISH	

Table 7

SOURCES OF INFORMATION

PERSONAL	IMPERSONAL
PERSONAL (AT HAND)	PRINT MEDIA
PAID EXPERT	BOOKS
FRIENDLY EXPERT OR RELATIVE	NEWSPAPERS
TUTOR	MAGAZINES NEWSLETTERS
FRIEND OR RELATIVE	ELECTRONIC MEDIA
PERSONAL (AT DISTANCE)	TELEVISION
CORRESPONDENCE STUDY	RADIO
TALKING CHAINS NETWORK	TAPES, DISCS
TRAVEL	HOME COMPUTERS
OTHER NON-SCHOOL GROUPS	OTHER SCHOOL-BASED GROUPS

Table 6

24

The learning process is a series of happenings which are encountered or which have been contrived by the individual. There are no hierarchial or authority relationships in the self-instructional mode and, in regard to instructional roles, the design of a learning sequence may have no interpersonal structure at all. In this model, the roles of student and teacher are united in the same individual. Control is as closely exercised as the teacher who accepts instructional responsiblity for a curriculum area and develops the syllabus within which the students are to be exercised towards learning.

A distinction can be make between the use of information for limited or sporadic periods of time and the more sustained application of it to continuing learning projects. Patterns of episodic information processing occur frequently in the daily life of most individuals. The concept of an episode has been established by research studies (Childers 1975; Dervin 1976) as the basic unit around which the development of a learning project is constructed. Episodes are not just theories imposed on human behavior but correspond to actual "chunks" of time and activity into which most adults divide their working hours in everyday life.

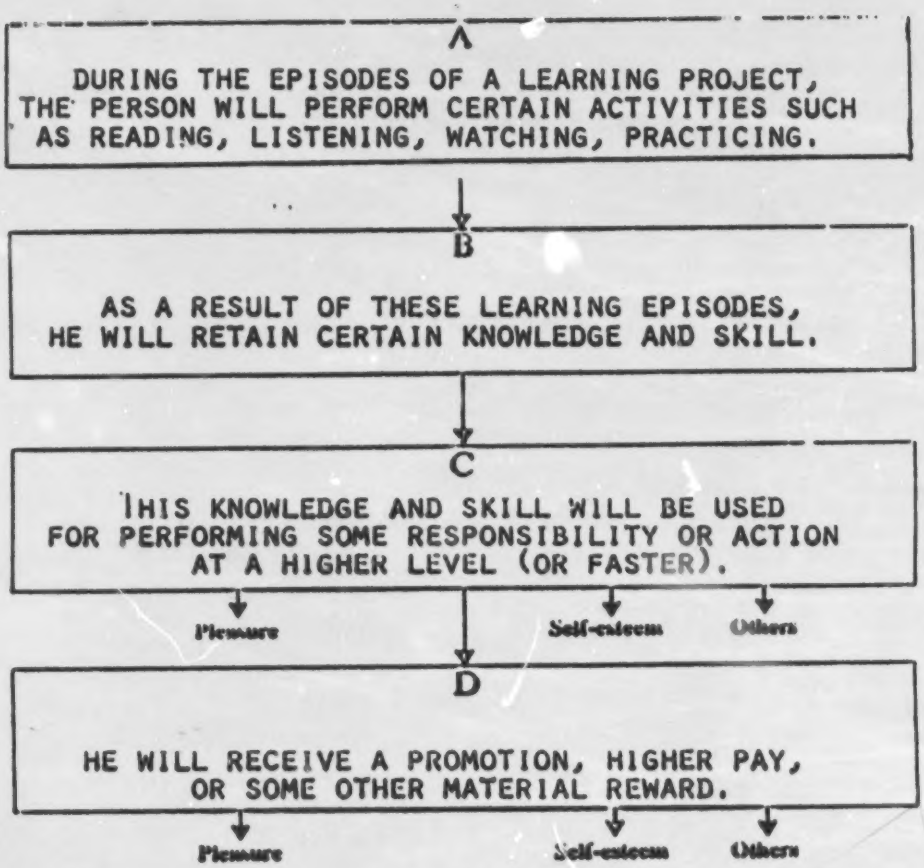
Self-Directed Learning: The initiation, planning and development of a self-planned learning project occurs within an environment or succession of environment over time. Even though the learner almost jealously protects a personal control and pacing of the project, the constraints and opportunities of the environment cannot be ignored. Support requirements are real and consist of the numerous helping sources consulted by the learner during project development and completion.

The concepts embedded in Tough's approach to self-planned learning stem from conceptions of the environment within which that learning takes place. Self-instructional learning emerges from the happenings and the environments encountered in everyday life. As the individual's initiative is strengthened in these encounters, situations are increasingly created within which learning is planned and developed around the personal objectives to be achieved. The sequence of planned events may include some that are created by others such as teachers and other resource persons; but regardless of the proportion of such additions, the individual learner remains squarely in control.

In the dynamics of individual development, the planning of a learning project grows out of and extends the episodic behavior of a span of attention. If the external imperatives are strong enough, the individual tends to link these together into the sequential activity of several related episodes which defines a learning project. The satisfactions obtained from linking episodes together include the following:

Concern & Interest	Process Involvement
Content Enjoyment	Learning Completion
Skill Enjoyment	Extraneous Reward

Table 8: EPISODIC DEVELOPMENT (Tough 1971)


A
DURING THE EPISODES OF A LEARNING PROJECT, THE PERSON WILL PERFORM CERTAIN ACTIVITIES SUCH AS READING, LISTENING, WATCHING, PRACTICING.
B
AS A RESULT OF THESE LEARNING EPISODES, HE WILL RETAIN CERTAIN KNOWLEDGE AND SKILL.
C
THIS KNOWLEDGE AND SKILL WILL BE USED FOR PERFORMING SOME RESPONSIBILITY OR ACTION AT A HIGHER LEVEL (OR FASTER).
Pleasure
Self-esteem
Others
D
HE WILL RECEIVE A PROMOTION, HIGHER PAY, OR SOME OTHER MATERIAL REWARD.
Pleasure
Self-esteem
Others

(DIRECTLY, OR FROM WHATEVER IS PURCHASED WITH THE MONEY)

The functional components of the learning process as delineated by Tough and associates appear to be centered around the learner and that person's perceptions of the environment. The components stem from the conception of self-instruction as the negotiation of happenings which occur or are contrived by the individual to engender within the self, both short- and long-term effects. The individual becomes a self "teacher" within the support system of a total happening or episodic environment. The individual is conditioned by initial perceptions and constrained in project phasing and syntax only to the extent that a certain perceptual combination may have become habitual.

The phasing and development of the learning project may at times be conditioned by perceptual style. But the environment within which the project is developed cannot always be controlled in a single pattern. The effects of the environment may be directed or modulated as the content and the skills, which are the bases of the activities engaged in, come from the components of the support system being consulted. The differentiation under consideration is between the implicit learnings engendered by environmental encounter and the explicit competencies being sought by an instructional developer from the planned and phased activities.

A rapidly growing number of individuals prefer those planning modes which include the self as planner ("teacher") or a closely associated and personally accessable helping "assistant" such as another human or non-human planner. These sets of negotiations have been called planning modes which learners articulate as clustering around the following four major methods of planning a self-initiated learning project:

> Self-Planner retains the major responsibility for day-to-day decision-making about needs and criteria for selecting and using informative data.
>
> Non-Human Planner such as a series of television programs, programmed instructional materials, a workbook or other printed matter can provide a learning blueprint.
>
> Human Planner or "significant other" person helps the learner in a one-to-one situation to fill the gap between a present level of competence and the skills necessary to access appropriate resources.
>
> Group Planner such as workshop or a class is accepted in whole or in part by the learner as the source of direction regarding what to learn or do in each episode of the learning experience.

A distinction is drawn between the planner of a learning project and the use of resources. The planner is the person(s) or program(s) which help in the linking of the episodes into a developmental whole. The planning process is given some extended consideration as Tough (1971) discusses each of the four main planner types -- self, non-human, one-to-one, group -- in turn.

Table 9: SOURCES FOR LEARNING (Peterson 1979)

SURVEY BANK	INVISIBLE UNIVERSITY
EXPERT (FRIEND, RELATIVE)	
BOOKS	REFERENCE BOOKS
CLOSE FRIEND/RELATIVE	
TRAVEL	
NEWSPAPER	
PAID EXPERT	
TELEVISION	TELEVISION
SELF-FORMED GROUP OF EQUALS	LEARNING GROUPS
TUTORING (INDIVIDUAL)	
CLASS/LECTURE GROUP	
MAGAZINES	
EXHIBITS, MUSEUM	ART CENTERS
BROWSING IN LIBRARIES	LIBRARIES
RADIO	
FILMS	
IN TRAINING, ROLE-PLAYING	GROWTH CENTERS
BROCHURES, NEWSLETTERS	
PHONORECORDS AND TAPES	CASSETTE CURRICULUM
CORRESPONDENCE STUDY	MAILBOX TUTOR
	LEARNING EXCHANGES
	NETWORKS (CORRESPONDENCE)
	CHURCHES
	FREE UNIVERSITY
	CAMPUS CONNECTION
	OPEN COLLEGE
	EDUCATION BROKERS
	GAMES
	ACTIVIST GROUP

ALTERNATE LEARNING ENVIRONMENTS

In any event, according to experiential learning theory, stimulus data from the environment (whether real, simulated or remembered) are intrapersonally processed into information. This surpriseful data, characterized as information, is processed during episodes of attention by adding to or modifying the knowledge base of the individual. Sometimes this new knowledge is verified in relation to the codified store of knowledge existing in library and information centers. The effect of the retrieved data is analogous to that of stimulus data and it too is synthesized with previously acquired knowledge.

These intrapersonal conditions or situations within which the individual is emersed arouse behavioral reactions that are characteristically particular to the perceptual state. Movement within the state can be either regressive towards the constraint or progressive towards opportunity achievement and into a changed set of behaviors within the human organism. In either case, time cannot be ignored over a sequential line of behavior by these activities (stochastic or cyclical and developmental). From Tough to Ziegler and beyond, self-directed learning research assumes a time-line of activity/processes to be investigated in various patterns, such as:

> Tough and Knowles to an extent, describe self-directed learning as a series of reflexive episodes which loop back on themselves in a continual process of refinement.
>
> Peters and others cast the episodic sequences of Tough into a problem solving mode of diagnosis, solutions, alternatives, and implementation that parallels Knowles andragogical steps of needs, goals, tactics, resources and evaluation of learning.
>
> Tough and Knowles along with Gibb include emotional support and climate-setting or trust that is gained by de-structuring environmental constraints and by divesting the self of role dependency.
>
> Ziegler has recast the presumed basic processes into steps of learner choice, enabling setting, participation, relevant sharing and, by doing so, adds communicative activity to information reception and processing.
>
> Stubblefield and Keisser consider the process of self-directed learning within the tutorial components of selecting, organizing and completing a topic.
>
> Luikart and Boucouvalas specify the variables of network interactivity which operate among the agents of learning within the vertical and horizontal axes of community systems.

Table 10: BEHAVIORAL "TIMELINE" (Dervin 1976)

STATE ORIENTATION; INTERNAL/EXTERNAL SELF, INTERNAL/EXTERNAL OTHER, NON HUMAN
EMBEDDEDNESS: SOCIAL, SITUATIONAL, PERCEPTUAL, PERSPECTIVE
SITUATION FACING -- STRATEGY: EMOTIONAL, DECISIONING, INTERPERSONAL COGNITIVE -- TACTIC: AVOID OR DELAY, DIRECTING OR DOING, CONNECT WITH OTHERS, OBSERVE OR VICARIOUS
RESOLUTION BARRIERS -- CONSTRAINTS: • EMOTIONAL OR RECURRING • COMPLEX OR UNCONTROLLABLE • INSTITUTIONAL HANGUP • INDIVIDUAL BARRIER (PEER) • BROAD SOCIAL ISSUE • NO RESOURCES, TIME, INFORMATION
INFORMATION TYPES: DATA, SURPRISE, GUIDE
QUESTION TYPES -- RELATED TO ALL ABOVE • ASSESS SITUATION • LOCATE SELF IN TIME/SPACE • REASONS, CAUSES • GET IDEAS OF OTHERS • OPTIONS, ALTERNATIVES • PROCEDURES

Table 11: Vertical-Horizontal Components

NAMING AND DESCRIBING AN AREA ALLOWS THE INDIVIDUAL TO CONCENTRATE AND SCREEN OUT INTERFERENCE.

ANALYZING THE REFERENT SITUATION INTO CONSTRAINTS AND OPPORTUNITIES HELPS THE LEARNER TO GET GOING WITHOUT COMING UP IMMEDIATELY WITH A FULL-BLOWN STATEMENT OF THE TOPIC, OR PROBLEMS OF INTEREST.

FREE ASSOCIATIONS ALLOW THE INDIVIDUAL TO REFLECT ON THE NATURE, EFFECTS AND CONCLUSIONS IMPLIED BY HI/R CONCERN.

OVERT QUESTIONS, TASKS OR "SHOPPING" LISTS OF THINGS TO DO INDICATE THAT THE LEARNER IS READY TO TALK ABOUT HI/R PROJECT WITH OTHERS.

BLUEPRINT EMERGES FROM ARTICULATIONS ABOUT WANTS (GOALS) AND ACTIVITIES.

SATISFACTION OCCURS WHEN THE LEARNER TRIES SOMETHING OUT AND FINDS THAT FEEDBACK IS FAVORABLE.

Information processing within an episode involves some modification of previous perceptual connections because behavior patterns are compared against remembered (or retrieved) knowledge. Sustained attention reduces "random" activity, discovers (retrieves) the information (surprise data), and builds competence to plan project sequence. New competencies are build by: (a) observing and receiving "instruction" from environmental imperatives; (b) making trial performances before adjusting to feedback; (c) growing more flexible and independent (self-esteem).

The self-directed learner (almost by definition) is capable of directing hi/r personal life through reasoned choice. Learning makes change meaningful according to some view that is worthwhile by involving the individual in the experience of molding, transforming or guiding it. Self-directed and sequential information processing becomes learning when the learner is taking charge of selecting the following:

Learning needs, goals and strategies are aimed at developing a self-planned learning project.

Times dedicated to learning episodes (days, evenings, nights, weekends).

Places for learning to occur (home, church, library, workplace, school, club, street corner).

Social setting for participation (alone, with family, friends, larger groups).

Human resources for planning (family, friend, supervisor, worker, citizen, expert).

Non human resources (written, audiovisual, experiential as in museum, programmed as in library).

Learning methods (discussion, lecture, seminar, workshop, growth group)

Unfortunately, the episodic nature of the learning time-line has not been sufficiently considered nor have processes in relationship with cognitive/learning style been extensively explored such as what turns on and sustains sequential considerations of the learning experience as a time-line of episodes. Other aspects of the episodic time-line that are neglected include situational embeddedness, interpersonal, preference, orientation state, goal direction, situation-facing tactics movement strategies, content stability, topic focus, helping utilities, resolution status.

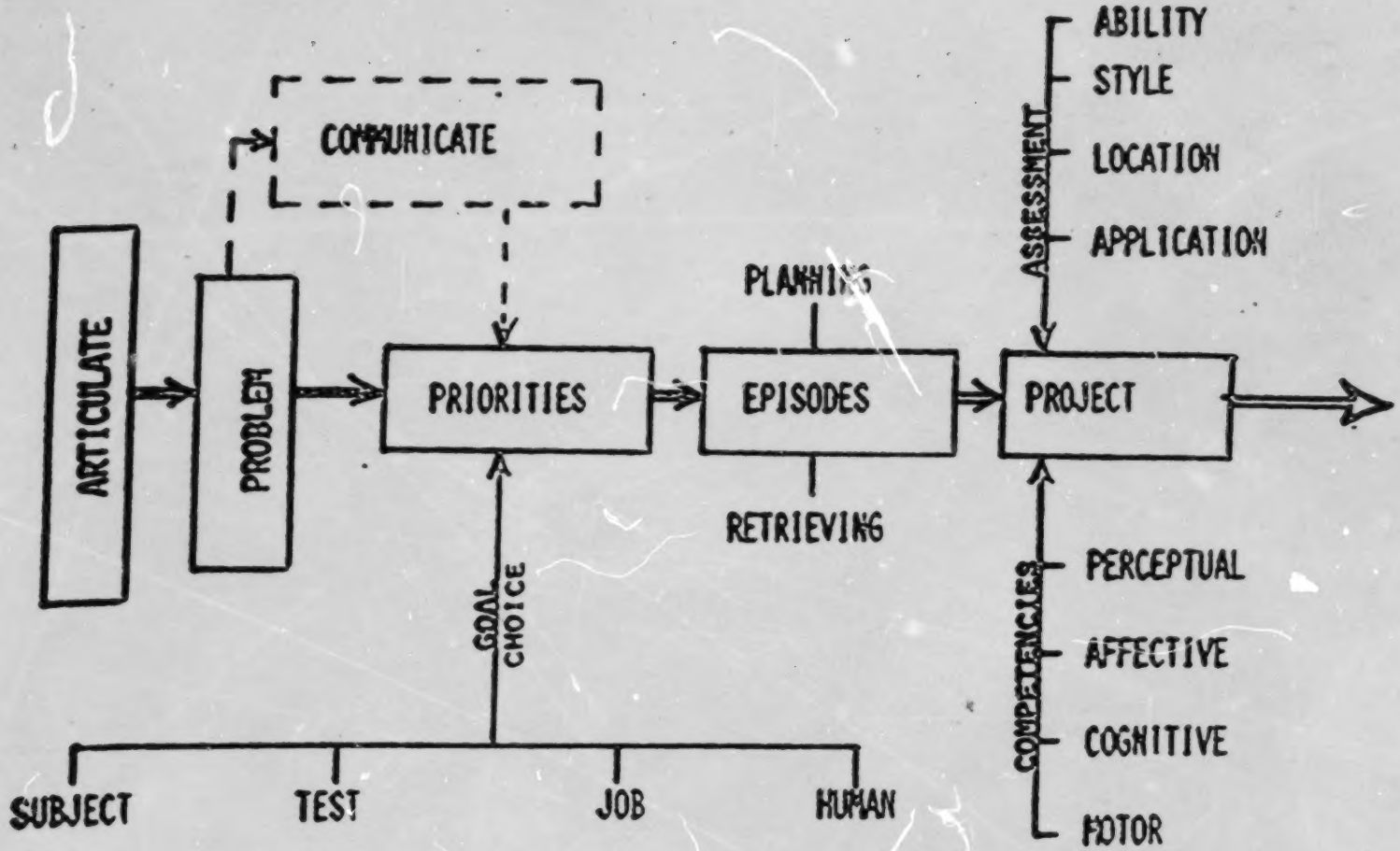


Diagram 7: LEARNING PLANNING AND DEVELOPMENT

Interim Overview

The learning process is a series of happenings which are encountered or which have been contrived by the individual. There are no hierarchial or authority relationships in the self-instructional mode and, in regard to instructional roles, the design of a learning sequence may have no interpersonal structure at all. In this model, the roles of student and teacher are united in the same individual. Control is as closely exercised as the teacher who accepts instructional responsiblity for a curriculum area and develops the syllabus within which the students are to be exercised towards learning.

The learner is the center of activity and source of input serving as the organizer, the pacer and chief authority in the sequence of episodes. Concepts are compared and behavior is shaped as some activities are given more attention than others. The learner selects personal means for judging and guiding activities which appear to be consistent with the emerging overall direction of the learning project. Like the teacher, criterion sets for evaluating performance and completion are induced while working with the learning materials and resources. Unlike the teacher, the learning sequence is not repeated as a method for the isntructional control of others.

The syntax of the learning emerges as the sequence is developed out of the resources and materials as these are retrieved and perused. Thus, the shape of the activities which typify the particular learning project is guided by individual perceptual development and characteristic ways of processing informative data. The approach may be inductive or deductive: working from the concept, or working from the data. In either instance, the phasing of a sequence of episodes develops in a different manner.

In the first instance, the learner apprehends a concept from some statement overheard, some passage read, or some film-tv program seen. This "advance organizer" arouses the interest of the individual to extend a pursuit of the topic. Additional materials are sought, retrieved from a variety of sources, and perused for content that is relevant to the original concept set. A "shopping list" of activities, sources to be consulted and other materials is prepared in order to guide the development of the learning project.

In the second instance, the learner is confronted by a number of interesting and surpriseful facts and bits of content which by their concurrance "ought to hang together." The learner assumes there must be some interrelationship and personally forms some patterns which appear to account for an underlying organization. The data is tentative, organized around concepts found in the self by the individual or obtained from the supportive resources. As these concepts emerge, they are variously successful in helping the individual to make sense out of the data.

Table 12:

LEARNERS	NONLEARNERS
1. POINTED TO THE FUTURE	1. POINTED TO THE PRESENT AND PAST
2. VIEWPOINT EMBRACES A LONG EXPANSE OF TIME	2. LIVES AND THINKS IN A SHORT EXPANSE OF TIME
3. MORE URBAN IDENTIFICATION	3. MORE RURAL IDENTIFICATION
4. STRESSES RATIONALITY	4. NONRATIONAL ESSENTIALLY
5. HAS A WELL-STRUCTURED SENSE OF THE UNIVERSE	5. VAGUE AND UNCLEAR STRUCTURING
6. HORIZONS VASTLY EXTENDED OR NOT LIMITED	6. HORIZONS SHARPLY DEFINED AND LIMITED
7. GREATER SENSE OF CHOICE MAKING	7. LIMITED SENSE OF CHOICE MAKING
8. SELF-CONFIDENT, WILLING TO TAKE RISKS	8. VERY MUCH CONCERNED WITH SECURITY AND INSECURITY
9. IMMATERIAL AND ABSTRACT IN THINKING (IDEA-MINDED)	9. CONCRETE AND PERCEPTIVE IN THINKING (THING-MINDED)
10. SEES HIMSELF TIED TO NATIONAL HAPPENINGS	10. WORLD REVOLVES AROUND FAMILY

III PRACTITIONER APPLICATION

A. NEEDS ASSESSMENT

The "how" of learning includes processes by means of which learning occurs as well as the instructional methods employed whether these are performed by adult educators or administered by the individual in self-directed learning. The "what" of learning includes both the subject content as in knowledge-based presentations as well as the field content as acquired in coping skills and community resource retrieval. Invariably, the how and the what are intimately related in real-life learning.

Needs assessment Surveys: continue to be a generally employed methodology of obtaining the how and the what of adult learning. Multiple needs studies are frequently recommended to practitioners as the basic approach to planning and program development. The data from 35 large-scale state and national surveys have been summarized by Cross (1981, p. 133-36) in 13 data based observations which as the author contends raise a plethora of additional research questions:

1. Participation and interest in learning increase with educational attainment.
2. Participation and interest decline with age, sharply after age fifty-five or so.
3. There are regional (including population density) differences in the extent of interest in adult learning.
4. Cost is cited as a major barrier to participation in adult learning.
5. The participation of black men and women in part-time adult education appears to be decreasing.
6. Dropout rates from adult education courses are especially high for black males and for adults of low educational attainment.
7. Educationally and economically deprived adults are especially interested in job-related learning.
8. Data on learning interests support traditional male-female roles, for example men are more interested in job-related learning.
9. Certain groups of people, especially the elderly and people with low educational attainment, present a "turned-off" profile of learning interests.

10. Advantaged adults are more likely than the disadvantaged to be engaged in learning activities for intrinsic reasons -- that is, for personal satisfaction and self-development.

11. Meeting new people and interacting with people is an important educational motivation for many learners, especially the elderly and others with restricted mobility.

12. There is much greater diversity of interest within demographically defined subgroups than between them.

13. The major barriers identified by survey respondents are socially acceptable barriers such as lack of time and high cost.

Some adult educators maintain that the field has a theory of instruction (Kidd 1973; Knowles 1970; Knox 1977). Others such as Doshler & Bonardot (1979) question this assumption and provide a convincing need for additional research. Despite differences in viewpoint, it is increasingly recognized that in order to move soundly from basic research to practice a theory of application is needed which in this case is a theory of instruction to complement the theories of learning. There are some areas of concern which should be given attention in instructional support services:

Materials aimed at lifestyle and at learning style.

Assistance -in-situation for the human experiential being.

"Missing-Link" professionals.

"Shopping-Center" support centers, or electronic cottage access.

RESOURCE SELECTION

(ALMOST "INSTINCTIVE" BY LEARNER)

Table 13

IS THERE EVIDENCE IN THE MATERIAL COMBINATION THAT THE ENVIRONMENTAL CONTEXT OF THE CLIENT OR ONE OF SIMILAR IMPACT INCLUDES THE RELEVANT TRANSACTIONAL AREAS?

IS THERE EVIDENCE THAT CONTEXTUAL OPPORTUNITIES AND CONSTRAINTS SIMILAR TO THOSE OF THE CLIENT ARE EXPRESSED IN TERMS OF WHAT OTHERS HAVE THOUGHT AND DONE WHICH CAN BE REALISTICALLY MODELED BY THE CLIENT?

IS THERE EVIDENCE IN THE MATERIAL COMBINATIONS THAT CLIENT INTEREST AND NEED TO KNOW CAN BE ENGENDERED BY THAT REPRESENTATION OF THE CONTENT IN THE RELEVANT PRIMARY MESSAGE SYSTEM?

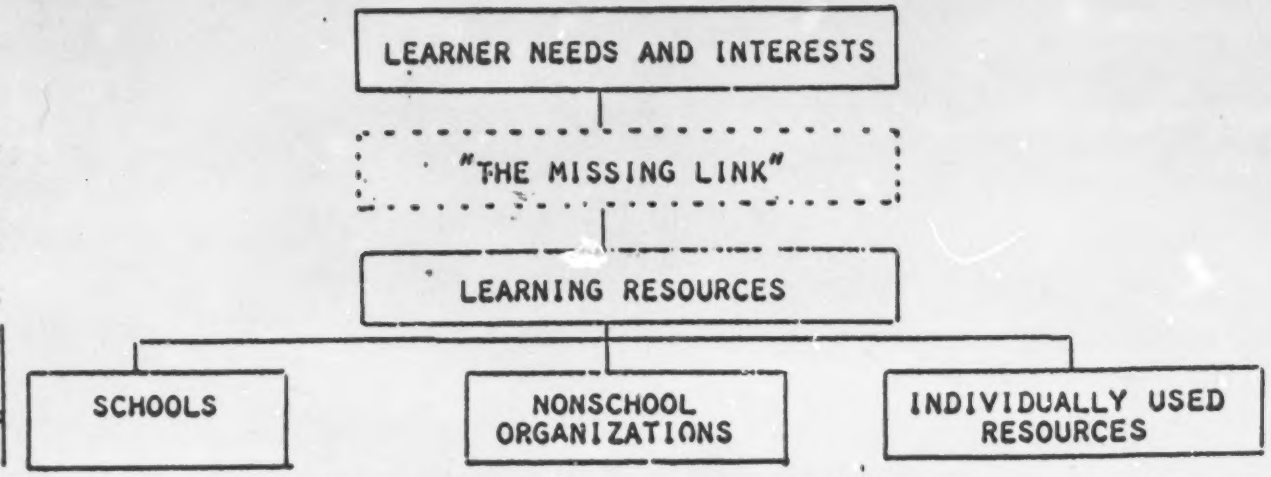


Diagram 8: (Cross 1976)

SCHOOLS	NONSCHOOL ORGANIZATIONS	INDIVIDUALLY USED RESOURCES
ELEMENTARY AND SECONDARY SCHOOLS	COMMUNITY ORGANIZATIONS	FRIENDS
PUBLIC SCHOOL ADULT EDUCATION	GOVERNMENT SERVICE	EXPERTS
EXTENSION AND CONTINUING EDUCATION	MILITARY SERVICES	BOOKS, NEWSPAPERS, MAGAZINES
COLLEGE AND UNIVERSITY UNDERGRADUATE	AGRICULTURAL EXTENSION	TV, RADIO, TAPES
GRADUATE AND PROFESSIONAL PROGRAMS	FEDERAL MANPOWER PROGRAMS	TRAVEL
PROPRIETARY SCHOOLS	PRIVATE INDUSTRY	
COMMUNITY EDUCATION	PROFESSIONAL ASSOCIATIONS	
	TRADE UNIONS	
	CITY RECREATION DEPARTMENTS	
	FREE UNIVERSITIES	

The environment may be the curriculum for self-directed learning; but the learner is neither at the mercy of, nor constrained by that environment. The learner uses the transactions and negotiations of everyday life for self-instructional development, and a full range of teaching and learning devices are encountered in the process. The facts of learning and self-instruction cannot be accounted for by any single theory or school of psychology, but would require the power of them all integrated at some future point in a grand synthesis. Of immediate practical concern are the issues of access known as "missing links" (Cross 1978):

HELP ADULTS ASSESS SITUATIONAL AND EXPERIENTIAL INVOLVEMENT AS WELL AS PERSONAL STRENGTHS AND WEAKNESSES.

PROVIDE INFORMATION CONSULTATION AND REFERRAL SERVICES DESIGNED TO ASSIST LEARNERS IN PLANNING AND IN MATCHING NEEDS TO APPROPRIATE RESOURCES.

NURTURE PERSPECTIVE TRANSFORMATIONS AND HUMAN DEVELOPMENT THROUGH LEARNING EPISODES AND COMMUNICATION ENVIRONMENTS.

FACILITATE ACCESS TO RESOURCES FOR UNDERSERVED GROUPS AND ADVOCACY FOR ADULT LEARNER NEEDS.

PROMOTE EFFECTIVE COMMUNICATION AMONG ADULTS AND PROVIDE ADEQUATE MEDIA PRODUCTION FACILITIES.

Of course, there are numerous statements about the preferences of adults regarding teaching methods and instructional development. These statements are then assumed to offer the best guidelines which can be employed in facilitating learning. There are many versions of these guidelines and the following set may serve to illustrate the matter (Brunner 1959, Chap. 2 as summarized by Verner 1964, p. 89-90):

> Learning is an active process and adults prefer to participate actively; therefore, those techniques which make provisions for active participation will achieve more learning faster than those that do not.
>
> Group learning is more effective than individual learning; therefore, those techniques based on group participation are more effective than those which handle individuals as isolated units.
>
> Learning that is applied immediately is retained longer and is more subject to immediate use than that which is not; therefore, techniques must be employed that encourage the immediate application of new material in a practical way.
>
> Learning must be reinforced; therefore, techniques must be used that insure reinforcement.
>
> Learning new material is facilitated when it is related to what is already known; therefore, the techniques used should help the adult establish this relationship and integration of material.
>
> The existence of periodic plateaus in the rate of learning necessitates frequent changes in the nature of the learning task to insure continuous progress; therefore, techniques should be changed frequently in any given session.
>
> Learning is facilitated when the learner is aware of his progress; therefore, techniques should be used that provide opportunities for self-appraisal.

There have been many advances since these principles were articulated almost a quarter century ago. But some practitioners continue to employ them as guidelines for instruction without analyzing their applicability to specific conditions; and they continue to appear in textbooks designed for staff inservice training. The problem with statements such as these is their generality and lack of careful derivation from theoretical positions. Nor are the conditions specified under which interpretations of the data of learning are made. It is difficult, further, to determine whether these statements are to be generally applied with situational invariance or whether it is possible to develop alternate learning environments.

On the other hand, what unfortunately all too often remains ignored is that any theories of instruction are by definition self-directed theories of learning. The tradegy of this ignorance is that learning psychologist and instructional designers have become experts in matters that at some level should be shared with the American public. Few citizens have the time and energy to become experts in instructional design. But the self-directed learner is entitled to as much help as can be made available and not be kept in place by the apparently formidable credentials of the learning psychologist.

The client system may eventually want objective and procedural information. But the first order of business in the initial interface is the professional who can listen to worry or complaints and help the client dredge up internal and subjective information. Citizens want the opportunity to describe themselves in unique situational involvement and have their efforts to "create" information recognized. The tactics and strategies of the client-oriented "professional" have to be those which elicit perceptions of worry over chance disturbances, complaints about shared and possibly divided control and apprehension over whether tentatively formulated hypotheses will be critized.

In this regard, the shared relationship between self-instructors and consultants ("teacher-tutors") has been explored in a relatively new approach. On the basis of a detailed examination of 20 biographies, the authors (Gibbons et al 1980) have formulated some principles of self-education as research constructs for further investigation:

> In self-education the locus of control is in the self-educator whereas in formal education the locus of control is in institutions, their representatives, or their prescriptions.
>
> > Teaching for self-education involves helping students to internalize control over their own learning.
>
> Self-education is usually a concentrated effort in one field rather than a general study of many.
>
> > Teaching for self-education involves helping students to identify and become expert at the activity or activities that may become central in their lives.
>
> Self-education is usually applied education-learning for immediate application to a task and from the practical experience involved in executing it.
>
> > Teaching for self-education involves integrating theoretical studies with technical training and practical application. It means learning for specific use now rather than learning for possible use years later.
>
> Self-educators are self-motivated that is, they are commited to achievement in the field of their choice, even when faced with difficulties.

Teaching for self-education involves helping students to generate their own drive toward their own goals rather than stimulating them to pursue goals set for them by others.

Self-education is usually guided by a vision of accomplishment, recognition or rewards valued highly by the individual.

Teaching for self-education involves helping students to see themselves successfully experiencing very desirable attainments. It involves learning to plan an effective way of making that vision a reality.

Self-educators tend to settle on the particular field in which their interests, talents, past experiences, and opportunities are combined.

Teaching for self-education involves patterns of exploration which enable students to try out a wide range of fields of activity.

Self-educators tend to settle on the unique pattern of formal, informal and casual methods by which they learn best-drawing from such possibilities as study, observation, experience, courses, training, conversation, practice, trial and error, apprenticeship, productive activity, group interaction, events, and projects.

Teaching involves helping each student to develop a personal learning style.

Self-education involves the development of attributes traditionally associated with people of character: integrity, self-discipline, perseverance, industriousness, altruism, sensitivity to others, and strong guiding principles.

Teaching for self-education should promote, model, and reward the development of personal integrity rather than the opportunistic pursuit of offered rewards, of self-discipline rather than obedience, or inner drive rather than the avoidance of punishment or the pursuit of artificial rewards, of caring rather than sustained competition and of strong internalized principles rather than externally imposed rules.

Self-education involves the development of attributes usually associated with self-directed and unique, even radical people: drive, independence of thought, nonconformity, originality, and talent.

Teaching for self-education involves promoting drive rather than passivity, independence rather than dependence, originality rather than conformity, and the talents that make individuals unique rather than the tasks that make them all act the same.

Self-educators use reading and other process skills to gain access to the information and guidance they need for their projects.

> Teaching for self-education involves training in the process skills, such as reading and remembering, especially at the moment students urgently need to gain access to information.

Self-education emerges as a theme that runs through a number of important experiences in the person's youth; later experiences maintain and develop them until it becomes a conscious focus of choices in the person's life.

> Teaching for self-education involves helping student identify themes emerging in their lives, to build on those they choose, and to create new themes they desire.

Self-education is best cultivated in a warm, supportive, coherent environment in which people generally are active and there is a close relationship with at least one other person.

> Teaching for self-education involves creating an active environment in which a student's self-directed activities are warmly supported and there are many opportunities to form close working relationships.

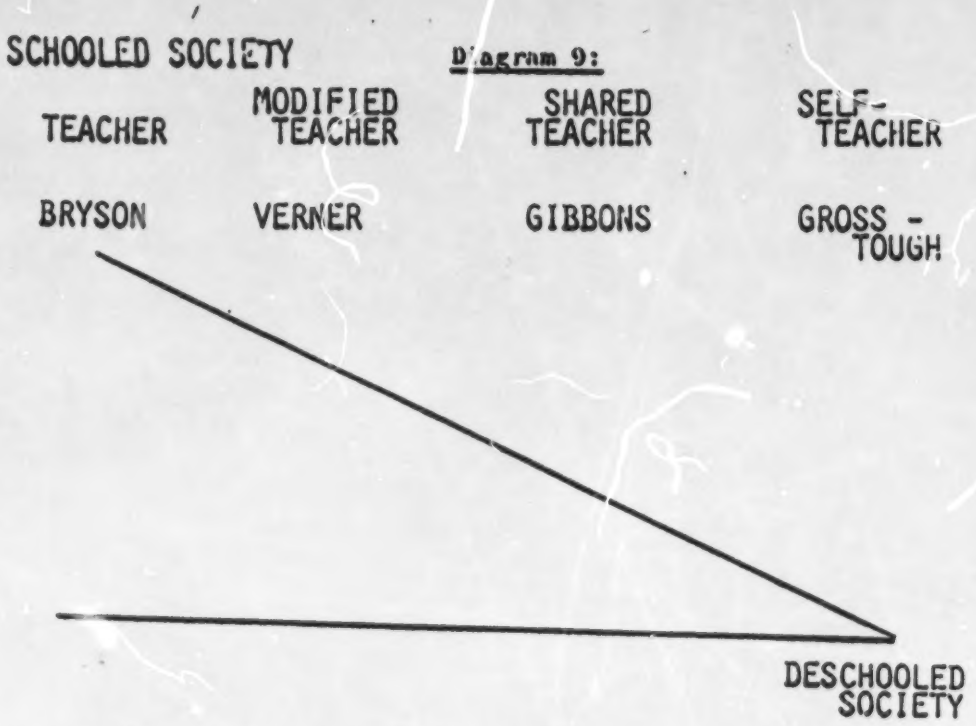
Self-educated people seem to like others and to be liked or admired by them; they seem to be healthy in attitude, body, and mind.

> Teaching for self-education involves promoting a holistic approach to learning so that students not only master some knowledge or skill, but they also develop a healthy attitude toward themselves, others, the world and their activities.

In addition to cultivating expertise, the characteristics described above outline a process of education suitable for the development of a mature personality, for achieving self-actualization and for the process of learning.

> Teaching for self-education involves helping each student to become an expert, a participant, and a person.

For a variety of reasons, most adults prefer their own learning development in environments of their choice. The technology is rapidly emerging by means of which the consumer can also become the author and producer of numerous products for communication purposes. With the emergence of inexpensive and large memories such as the videodisc, the consumer can determine which view-data elements are to provide surpriseful information and with the electronic camera turn that informative data into communication products.



This diagram (above) is designed to illustrate the changed emphasis in instructional method that has occured in the past near 50-year period. At the beginning of this period, Bryson (1936, p.88) has this to say about self-directed learning:

> Ultimately the goal of all adult education is the independent pursuit of learning. But, desirable as the constant growth of independence may be, it still remains that some kinds of learning will always have to be done in the society of fellow students. Some kinds of learning will always depend upon the guidance of a leader or teacher.

Many others have commented on the roles of the teacher and the self in the directing of adult learning. In the immediately preceeding pages, excerpts have been quoted from the prescriptions of Verner (1964) and the conclusions of Gibbons (1980). To this list of comparative guidelines can be added those of Gross (1977, p. 17-18) which surely are characteristic of a "deschooled" society:

> Your education is something you must tailor to yourself, not something you get ready made.
>
> No particular way of learning is in itself superior to another... design procedures that suit your convenience and taste.
>
> Immersing yourself in a new situation can be a prime way to learn.
>
> In devising your own curriculum... tap an extraordinary array of resources at home, at work, and in the community.

B. CONCLUSIONS AND POLICY CONSIDERATIONS

One of the most universal criticisms made by practitioners in regard to research is that the reported results of investigations show little if any relevance to actual conditions in the field. The needs assessment type of investigation offers the adult education practitioner a method which could help to alleviate this predicament. This is especially the case if sections of these multiple surveys of community need could address the widespread phenomenon of self-directed learning behavior among citizens of all ages and interests.

As a self-directed learner, the individual continues to be involved in the transactions and negotiation of an interactive environment, as an independent scholar that same person contributes to the richness of the available resources. Interpersonal communication is facilitated as the network of community-based professionals can be accessed from electronic cottages mediated for interactive learning environments. Quality of life is enhanced as the process of self-directed learning become accepted as the long-neglected therapy entailed by a psychologically integrated approach to human development.

In this regard, for example, further analyses of the literature and practice of adult education are needed. The theory embedded in its present research base can be articulated and developed into research constructs in order to guide investigations of such questions as:

> How can the self-directed learner be helped to find a way through institutional resources without suffering a loss of control over the development of individual projects?
>
> How can community education accommodate the self-directed learner so that the individual can advance outwardly towards an expansive self and a widening interpersonal network?
>
> How can institutionally-based professional time be redeployed so that self-directed learners will have access to learning service on a "case-load" basis?

An expansion of empirical inquiry into the dimensions of self-directed learning will enrich the research base of adult education. Since self-instruction is almost by nature interactive, the adult educational researcher will be led away from the analysis of limited variable sets towards those multivariate designs which more clearly approximate actual learning conditions. In turn, practitioners too will benefit as the principles of interactivity are applied to the creation of environments within which meaning for the individual learner can the more easily be engendered.

In point of fact, the continuing educational "system" in America is becoming so networked, for example, through Educational Information Centers (EIC) that entrance requirements and exit ("graduation") credentials are becoming meaningless. Thus, the continuously supportive resources and learning facilitations are the most demanding implications for agencies not in the network supporting the widespread involvement on the part of American citizens in self-planned learning.

The lifelong self-directed learner may want to continue into post secondary education or remain involved as an independent scholar. The general availability of such programs as the Cooperative Advancement of Experiential Learning (CAEL) and the College Level Examination Program (CLEP) has tended to blur the distinction between the wisdom obtained from real life and the knowledge earned in credit courses.

If so, a community-based system of adult education agencies can allow for preliteracy orientation, resource access and programatics in addition to adult basic education (ABE). Other individuals may want to advance through the adult proficiency level (APL) and/or the general educational development (GED) programs. Vocational education may be started in the technical school but on the job training is a major investment of business and industry (B&I) in order to achieve worker productivity:

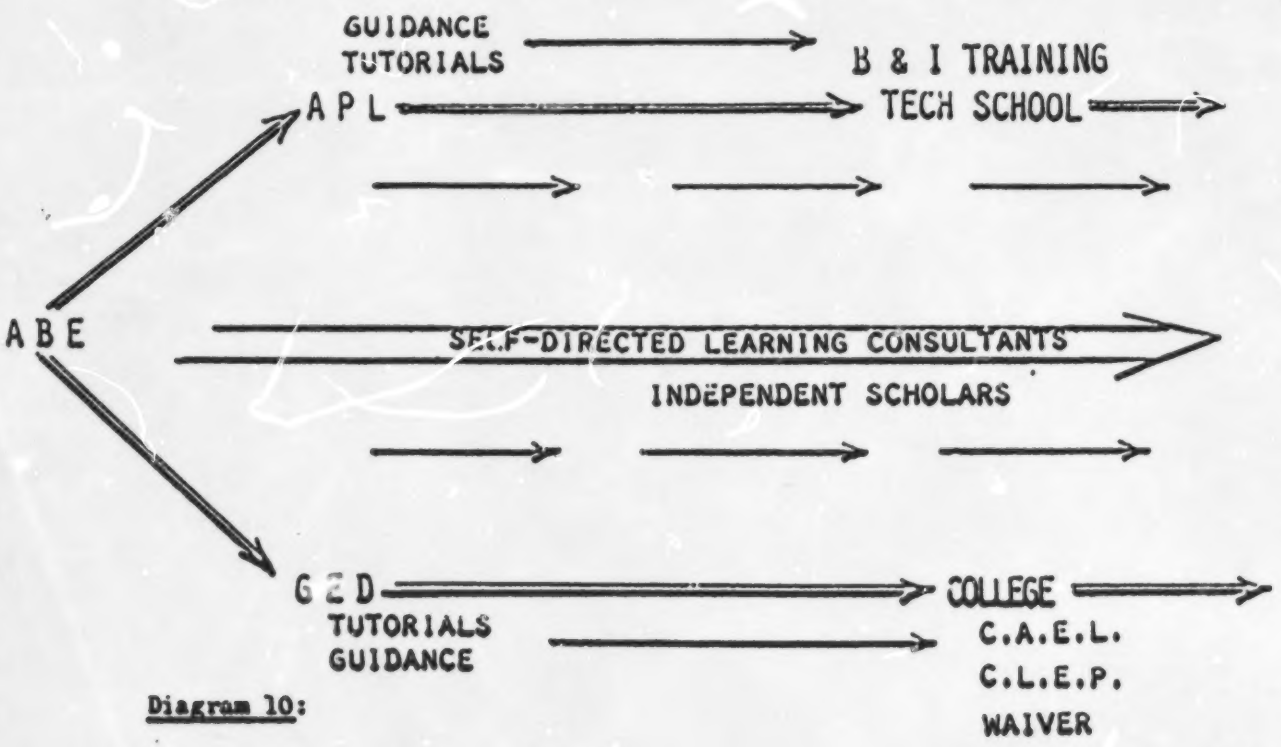


Diagram 10:

In an effort to increase their visibility and offset the marginality of much adult educational and especially ABE programming; many community-based agencies have been led to initiate needs assessment studies. As the results of these full-fledged, multiple surveys of community needs become

better known, not only may self-directed learning services be included in their programming but the agency itself may enlarge its mission to include lifelong and lifewide education for all citizens. If so, any citizen (pre-literate or not) should be able to enter the community learning network at any point of personally self-assessed need and be helped toward any other point of self-directed competency attainment.

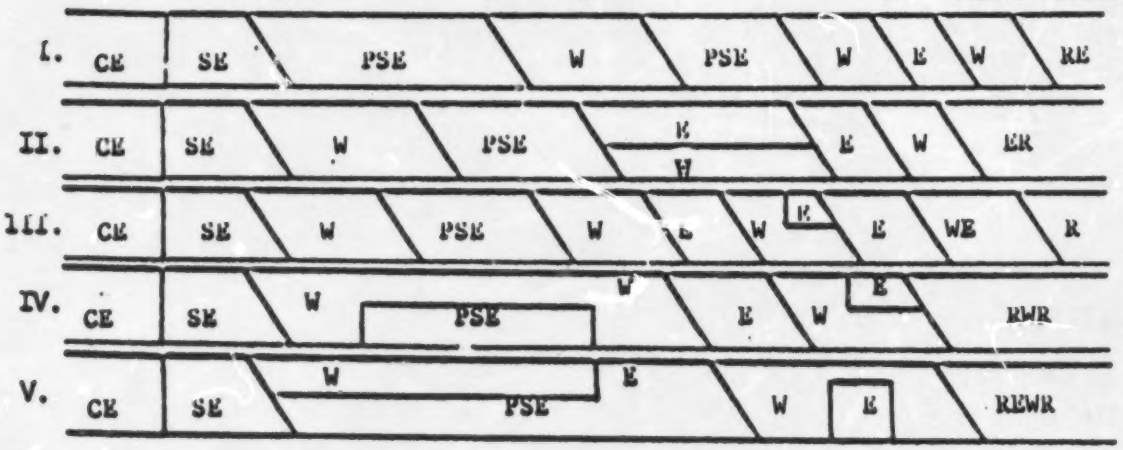
The community, if not the neighborhood, is the locus within the lifelong learning society for most self-directed learning. It is here that the individual can have an impact upon sociocultural affairs through an interactive network of personal relations. Lifelong learners can not only increase in responsibility for their own learning but also share that learning when participating in community oriented projects. The reciprocal effect of this sharing and mutual exploration helps to eliminate competition and promotes cooperation without which the quality of life would deteriorate.

From the citizen's viewpoint, there is a considerable discrepancy between the expectations being raised in widespread self-planned learning and the availability of personal access to needed sources and provisions. Adults involved in lifelong learning require "shopping-center" access to the delivery of human services in order to offset the usual "run-around" of various learning and information sources. Shopping center access is attainable when adult educators, information brokers and community development personnel work together on the interdisciplinary teams so essential in today's communities.

Diagram 11: MODELS OF LIFELONG LEARNING (Kurland 1976)

CE = COMPULSORY EDUCATION SE = SECONDARY EDUCATION PSE = POSTSECONDARY EDUCATION

E = EDUCATION W = WORK R = RETIREMENT



So prevalent is the use of community learning resources in developing self-initiated learning projects that one can talk of the "invisible" university as a functional alternate to the institutional and academic delivery systems. Such a university whose media center may be the local museum or cable TV access station is only invisible in that it does not have institutional recognition; and this is in itself may be a good thing. Certainly in these instances, people are not constrained by credits, groups and teachers in creating new ideas and innovative projects so necessary to the quality of life in this last quarter of the century.

Perhaps the most important conclusion of all is that citizens no longer feel it necessary to apologize for their out-of-school learning as if it were somehow below the level of acceptability. Self-initiated and self-planned learning <u>is</u> learning of a high order made so not simply by its prevalence but by the care and deliberation taken in its development. The learning which occurs is a credit to the ordinary American citizen and should be recognized by a self-learners Bill of Rights. Rights such as these demand at least "formal" or official recognition of citizen accomplishments in lifelong learning.

Beyond this, such a [illegible]l could establish standards for community agencies and institutions [illegible] means of which their relevance in supporting lifelong learning could be appraised and evaluated. Such a statement, perhaps supported by state and federal policy, would recognize the widespread occurance of self-initiated and self-planned learning. But of greater significance would be an acknowledgement of the resources and provisions of the community as the primary environment programmed for learning and within which the maturation of the individual and the quality of social life are enhanced.

One thing is certain; the majority of adult citizens do not have a pathological overreliance upon the schools and credentialing for the most important learning of all -- the self-maturation of the individual citizen. Thus the community has become a school and the market place of learning opportunities and of resources available for planning self-initiated learning projects where media materials almost litter the landscape; where sight and movement inform the eyes with surprising variety; and where the ear learns about the widest coverage of events whether local or international.

Policy Considerations:

Learning has become a fact of life. Indeed, how else would one respond as effectively to the transactional imperatives of everyday life? Humans learn to respond effectively to other people, objects and events around them by using selective perception and differentiation, forming patterns or concepts and seeing relationships, as well as organizing information into outcome competencies or products.

Of parallel importance to the emergence of the learning society is the obvious individualism of self-planned learning. In the past, it has often been a voiced regret that Americans are becoming conformist, oriented towards group-think and institutional loyalties. But the evidence is emerging that individualism is alive and well in America expressed in the prevalence of self-initiated learning activities.

It appears that the establishment, whether educational, governmental or social, is ill-prepared to accomodate the existence of self-directed learning. The self-planned learner may not be anti-institutional; but that person is largely a-institutional -- one fact that is almost as frightening as the other. Thus, despite its de facto existence, the vast amount of self-planned learning remains submerged, known only to the millions of Americans who are actively involved. Very few attempts have been made to gain the visibility which such democratic involvement in learning deserves. But attitudes are changing as would appear from the following quotation:

> I am becoming increasingly concerned about the overeagerness of some colleges to attract adult learners into college classrooms; their goal would appear to be institutional survival rather than social good . . . I believe that <u>all</u> education, especially post-secondary education, should be directed toward making people more self-directed learners and colleges can contribute very constructively to that goal if they are encouraged to think beyond institutional survival to providing for the real needs of adult learners. (Cross 1980, p. 629 as quoted by Hiemstra 1980a).

In mass movements sanctioned by most of the people such as self-directed learning has shown itself to be, an inflexible institutional structure is ultimately the loser. Such a defeat may come much sooner than expected because of the learning and communications technology that is increasingly and rapidly being placed in the home as an electronic cottage. The electronic technology, in the form of personal computers and home video centers, is readily available to all citizens for 3-4 weeks of the average worker's salary. Thus, almost anyone can now easily by-pass any adult education agency and obtain similar if not better instructional services delivered in the home.

In an effort to enhance the visibility of self-directed learning among adult educators and lead towards more effective institional response patterns, several consultants and others were assembled by Hiemstra (1980a). The aim of the group in workshop setting was to address the implications of prevalent self-directed learning and develop such policies as could serve as guides to the professional adult education community. The general purpose underlying the venture was stated as follows:

> Since research indicates that adults carry out a number of learning projects during their lifetime, and that most projects appear to be self-initiated, self-planned and/or self-directed, adult educators and institutions which have adults as clients should work to understand, enhance, and provide an environment conducive to facilitating this type of learning by adults (Hiemstra 1980a).

This initiative on the part of Hiemstra and his group is recognized as a major advance in alleviating the problem of institutional non-response

to the social phenomenon of self-directed learning. Employing policy science methodology and subsequent consequence analysis, several response modes to this area of pressing concern were developed under the topics of Adults as Learners, Adult Educators, Adult Education Agencies. It is hoped that similar steps will be taken by others in order (1) to alleviate this problem, (2) to give some attention to the implications of widespread self-planned learning and (3) to avoid the rapidly increasing competition for classroom based students.

It was not the intention in Hiemstra's report of policy development, nor is it here in this paper, to ignore adult learning in course-like activities. Course instruction has been the stock-in-hand of adult and vocational educators, and billions of dollars are invested in on-the-job training every year. But the fact of the matter is that proportionally this vast investment of effort and resources is but of small interest to the overwhelming majority of American citizens. Consequently, the concluding observation remains: are citizens to be ignored because institutional staff have yet to find a way to respond adequately?

Educators have increasingly had to take into account this growing need of many people for more control over the learning enterprise. Clients prefer an "agenda" of their own devising however emotional and personal it may appear. They want to talk out their version of the situation and "dredge up" from their own background the framework for a solution that can be personally satisfying. Once this creative endeavor is completed, then and only then are they ready for the services which can be proffered by the professional.

The citizen wants to focus on internal sense-making and the development of a unique response pattern dredged up out of previously acquired knowledges, attitudes and behaviors. Unfortunately, these intrapersonal approaches are considered to be nonrational by some educators. But, such processes are no more irrational than those of the formal classroom teacher who begins each instructional unit and subsequent lesson-plans with descriptive or higher-order probes into the recall of stored cognitive information. The essential difference is that, with self-directed learners, the method is "online" and transactional; whereas the teacher operates in a linear and more highly structured environment which can be mediated.

Competence in learning is a patterned activity designed to perform a coordinated set of behaviors and accomplish a goal set. Self-initiated learning by respondents involves the comparing of behavioral patterns against remembered or retrieved knowledge as well as the modification of perceptual connections. Sustained attention reduces "random" activity, discovers information and builds the competence to plan an entire learning sequence. In the process, new competencies are built by observing and receiving "instruction" form environmental imperatives; by making trial performances before adjusting to feedback; and by growing more flexible and independent.

Summary Overview:

A broader perspective is developing over the fact that community problems can be solved most readily and satisfactorily at the local level. Leadership for this endeavor is being expected from helping teams composed of practitioners and from various social professions instead of individual consultants predominantly. One thing is certain and that is that several implications for adult education emerge as conclusions to be drawn from self-directed learning. These directions may hopefully lead to action in the two areas of programatic redeployment and research development. Of course one may ask: if learning is so prevalent why do anything about it? But such a laissez-faire attitude is scarcely consistent with the social objectives of contemporary professions.

It would appear that most adult learning is undertaken for the creative use of leisure time (for "fun"), for human understanding, for citizen development, or for advancing the quality of life and will probably continue to be conducted outside the normal range of institutional support. Public attitudes will gradually change. The fact of the prevalence of self-planned learning will no longer be suppressed. More and more people will recognize it as a valuable activity and the concept of the learning society will become more generally accepted.

Deliberate efforts towards the institutionalization of self-initiated learning may be a disservice. But programatic redeployment does not have to be limited to the traditional concept of service delivery. Perhaps the professional consultant can accept the perceptions of a growing range of people who are beginning to recognize the need for "shopping-center" access to multidisciplinary teams of learning consultants and information brokers.

Certainly, self-planned learning could have a higher social status than it now has. People should not have to apologize about such involvement simply because the culture has taught them that such activity is not what learning really is. It could be more widely supported as the thing to do and appropriate help could be more widely available based on caseload and independent study concepts. Professionals increasingly will accept and employ credentialling as an instructional method.

A Bill of Rights for adult learners would recognize that a creative and socially relevant use of individualism is alive and well in the prevalence of self-initiated learning. A periodic federal report in lifelong learning would recognize the interdependence of adult development, and economic and social well being. Certainly it could serve to fill the need for standards in appraising the delivery of present day adult learning services. In addition, such a bill of rights may motivate more practitioners in continuing their own professional education.

In all of these and other implications which may yet emerge, a great deal more research is needed in order to answer all of the questions that come up. A great deal of educational research is of course available where internal validity of the design is much higher than its external validity. The educational research could support those movements in other professions leading towards more "ecological" designs relevant to the transactional life of adults.

Of immediate concern to the practitioner, a high priority may be assigned to an identification of the extent to which requests for professional help are an outgrowth of previously self-initiated learning. Little is known about the origins of self-planned or formal learning complicated as it is by the question of motivation. Of related interest is the perception of the role of the group in the learning process. From the analyses conducted in the studies being reported, it appears that the group is tolerated and employed as a learning resource only when unavoidable.

People who learn on their own are usually quite successful in the transactions of daily life. Somehow they have the knack of finding their way around many information sources -- chosing the right material and finding the right people on their own. One may speculate as to whether they are driven into doing their own thing because of the traditional model of assistance. Would a client-centered helping relationship help to expedite their search and retrieval forays?

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